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ABSTRACT

Hypertensive disease being one of the most important medical problems now facing American medicine brought about the formation of the Federally sponsored National High Blood Pressure Education Program, which included four Task Forces. Task Force 3 reviews in this study information and experience useful for the development of guidelines for community health education programs for hypertension. The document contains 16 recommendations, objectives to be achieved in community education, the two functions of community health education (producing change to benefit the health status of the community, and eliciting behavior likely to lead to change), statement of the problem, community resources and their functions, a progress report and action steps to be taken, and evaluation mechanisms. A seven-page bibliography and five appendixes on: target groups, medical high risk groups, identified hypertensives, a report of a community education development meeting, and insurance study findings are included. (BP)

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NATIONAL HIGH BLOOD PRESSURE EDUCATION PROGRAM

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REPORT TO THE HYPERTENSION INFORMATION AND EDUCATION ADVISORY COMMITTEE

TASK FORCE III

Community Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SEPTEMBER 1, 1973

In July 1972, then Secretary of Health, Education, and Welfare Elliot L. Richardson launched the National High Blood Pressure Education Program, a nationwide program of professional and public information designed to reduce the morbidity and mortality resulting from this disease in the United States. The National Institutes of Health was designated as the HEW agency responsible for the coordination of the National High Blood Pressure Education Program, with the National Heart and Lung Institute as the focal point.

Development of a High Blood Pressure Education Plan was entrusted to two appointed groups: a Hypertension Information and Education Advisory Committee composed of 12 nonfederal members with specialized professional interest in and knowledge of hypertension or communications, and an Interagency Working Group composed of representatives of federal agencies (Health Services Administration, Health Resources Administration, the Food and Drug Administration, the Veterans Administration, the Department of Defense, and the National Institutes of Health) to provide coordination and program development. These groups were assigned to four Task Forces, whose mandates defined the thrust of the program:

Task Force I, Data Base, was to arrive at a common base of agreed-upon scientific definitions and standards for the diagnosis and treatment of high blood pressure.

Task Force II, Professional Education, was to develop a plan for the education of health professionals.

Task Force III, Community Education, was to develop a plan for public education emphasizing detection and the need for continued follow-up of hypertensives.

Task Force IV, Resources and Impact Assessment, was to study the impact of the projected program on the existing health care system and assess the resources needed for full implementation of the program.

During the past year, the four Task Forces have worked to gather and analyze relevant information to complete their plans. In the process, they have conferred with numerous experts in the field, sponsored a National Conference, conducted several workshops, and administered a public survey. The written reports of each of the Task Forces are being presented to the Secretary of Health, Education, and Welfare on September 1, 1973, and form the basis for an action program which is currently being initiated. For further information on this program, contact:

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REPORT OF TASK FORCE III – COMMUNITY EDUCATION

RECOMMENDATIONS
FOR
A NATIONAL HIGH BLOOD PRESSURE COMMUNITY EDUCATION PLAN

September 1, 1973

DHEW Publication No. (NIH) 74–595

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NATIONAL HIGH BLOOD PRESSURE EDUCATION PROGRAM

TASK FORCE III

Community Education

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FOREWORD

Hypertensive disease is one of the most important medical problems now facing American medicine. This importance is increased because of recent evidence that hypertension can be controlled. Undetected and uncontrolled hypertension has subjected many of those persons affected to disability and/or retirement at an early age. Even more serious is the high mortality resulting from hypertensive-cardiovascular renal disease.

According to health statistics, the leading causes of death in the United States are heart disease in its various forms, cancers, and stroke. From a sociological point of view, however, the major causes of death for many could be cited as poverty, ignorance, and the inaccessibility of health care. Specific measures to reduce mortality and morbidity from these causes, which include both social and health solutions, must be sought.

Therefore, the Task Force has reviewed information and experience to develop guidelines for community health education programs for hypertension which will:

- Use a wide variety of effective communication routes and cultural settings.
- Use specific presentations designed for target audiences.
- Focus primarily on basic information needed to change health actions.
- Include recommendations on how to identify and remove or circumvent barriers to health care.
- Focus on clarification and correction of misinformation and on assurance of wide dissemination of accurate information.

The Task Force approached its charge, "to develop a plan for community education with emphasis upon detection and follow-up," intent upon initiating and supporting immediate action where feasible. The development of high blood pressure media materials and the establishment of an Information Center are examples of action steps in process. The total action required for "dissemination of information to the public" is complex and requires involvement, cooperation, and coordination of every major communication and health service resource responsible to the public. The federal government must be a prime mover as initial coordinator and contributor. The local community with its own resources, awareness, and initiative is the basis for success. The following pages represent only the beginning of an effort to encourage and support community action in high blood pressure information and education.

RECOMMENDATIONS

To enhance the potential for a lasting effect from the efforts of the National High Blood Pressure Education Program, the Task Force on Community Education has developed several major recommendations. These recommendations are the following:

1. The High Blood Pressure Information and Education Advisory Committee should provide for expanded consultation from a Resource Group (recommend establishment of) including 30 to 40 individuals of which at least one-half should be representatives from currently operating community programs involved with high blood pressure detection, education, treatment, and follow-up.

   Other members would come from professional organizations and agencies such as: Directors of High Blood Pressure Education of the American Medical Association, National Medical Association, American College of Cardiology, American College of Physicians, American Heart Association, American Academy of Family Practice, Association of American Medical Colleges, the American Hospital Association, the Veterans Administration, National Heart and Lung Institute, the Food and Drug Administration, the Health Services and Mental Health Administration, the Department of Defense, the American Nursing Association, the Association of Schools of Allied Health Professionals, the American Public Health Association, and other experts in hypertension, professional and community education, evaluation, and communications as needed. In addition, membership should contain representatives from the Citizen's Committee for the Treatment of High Blood Pressure,

the Student American Medical Association, the Student National Medical Association, the Association of Teachers of Preventive Medicine, the Organization of Black Scientists, the Association of Industrial Medical Directors, and the Association of Life Insurance Medical Directors of America. Three-year staggered terms are recommended. The magnitude of the hypertension problem among blacks is a critical concern that must be emphasized and addressed realistically; a representative number of blacks should be included on the Advisory Committee and the Resources Group.

2. The present High Blood Pressure Information Center should be expanded immediately to a Resources Development and Information Center to serve as the operational arm of the National High Blood Pressure Council. The Resources Development and Information Center should be staffed with health education professionals as well as media professionals to ensure a wide spectrum of professional direction to the public and industry. As a minimum, this center would have the functions described in Section 5 of this Task Force III Report as well as others designated by the National High Blood Pressure Advisory Committee and approved by the Assistant Secretary for Health.

   Federal funds should be allocated to the staff of the High Blood Pressure Information Center to issue an RFP for the purpose of negotiating with a major television network to produce a nationally broadcast high blood pressure education program. This education program would utilize substantiated data collected in the National High Blood Pressure Interview Survey by Louis Harris & Associates for Task Force III. An appropriate format may be that employed a few years ago by CBS in the "National Driving Test." November 1974 is recommended as a target date.

3. In order for the expanded Resources Development and Information Center to be responsive to known community needs, it should address the following functions:

   — Gather and disseminate information about high blood pressure and high blood pressure programs to lay and professional persons and groups. This activity is seen

as an active outreach program, not as a passive office responding only to spontaneous requests.

- Coordinate the development of program materials.

- Develop Program Development Consulting Team(s). The consultative functions would include assisting communities to: (1) identify resources; (2) develop and organize initial participant recruitment strategy; (3) identify types needed and sources or means of collecting baseline data; (4) analyze community education needs and develop educational strategies; (5) develop program evaluation measures; and (6) devise optimal screening and follow-up mechanisms given the limitation of local resources and other similar tasks.

- Provide administration for support grants, of 1 year only at approximately a $25,000 level, to communities for the purpose of initiating coordination and planning of the programs.

- Provide for the development, updating, and evaluation of public and professional educational materials.

- Provide for a continuing program of public awareness.

- Provide for a communications link among community high blood pressure programs.

4. Since young and middle-aged men present a specific priority problem group, all major industries and unions should be encouraged to establish hypertension education as a top priority in health programs for employees or members and their families. In addition, employees and members should be urged to become directly involved in local health councils or equivalents. These actions should be accomplished by development of a cooperative action program among the National Heart and Lung Institute, National Institute of Occupational Safety and Health, Department of Labor, National Association of Industrial Health Councils, Association of Industrial Medical Directors, and major industries and unions.

5. Within the Department of Health, Education, and Welfare, an annual employee screening program should be established by January 1975, giving priority to health education on high blood pressure and to preventive health care programs, including measurement of blood pressure. Efforts should also be made to promote similar programs in other agencies of the government.

   In addition, all federally supported research, evaluation, and demonstration programs in health which involve patient care should require blood pressure measurement and appropriate referral for treatment when at all possible.

   Health messages emphasizing high blood pressure should be included in regular government mailings, such as Social Security checks and federal employee checks. The High Blood Pressure Public Information Center should develop a campaign model or strategy and encourage adoption of same by industry.

6. Public endorsement should be made by the Department of Health, Education, and Welfare that, in every health examination and health care facility, appropriate emphasis be placed on the importance of high blood pressure. In all health facilities, blood pressures should be routinely measured, educational efforts undertaken, and referral made for verification or treatment.

   All health facilities should participate, including special purpose settings such as psychiatric, dental, and ophthalmologic offices. This system also should be coordinated with or assimilated into the plan for appropriate surveillance of treated patients and of high risk persons.

7. Resources should be developed for recruiting and teaching additional community health educators and for providing continuing education to present community health educators. This task should become a top priority item for the proposed National High Blood Pressure Advisory Committee.

8. The American and National Medical Associations and state and local medical associations should be formally encouraged

to: clarify the difference between unethical advertising and appropriate reminders for follow-up appointments to patients with chronic diseases. These reminders have been demonstrated to be effective in increasing patient compliance to long-term regimens.

Many physicians seem to be concerned about adopting an initial minimal diagnostic workup on hypertension patients. The medical associations should be encouraged to help alleviate this concern by communicating and recommending to physicians the current guidelines prepared for publication by Task Force I.

9. The American Heart Association and other health and community service organizations should train volunteers in a certification program to deliver an educational message regarding high blood pressure. This approach could also be used by the organizations for other clearly and narrowly defined health education areas. Development of exemplary programs for government employees — including legislative bodies — is recommended.

10. The drug companies should be formally encouraged by the Advisory Council to experiment with incentive-type programs designed to alter the drop-out rate and increase the long-term use of antihypertensive drug therapy. A cooperative approach by drug companies, physicians, and pharmacists would constitute the basis for such a program. One example of an incentive program might be use of a dated coupon or stamp redeemable at the pharmacy when purchasing antihypertensive drugs. The stamp could offer the purchaser a discount (assumed by the drug manufacturer). Encouragement to maintain therapy would be the goal.

11. A working group of representatives from health and education fields and from the Department of Health, Education, and Welfare should be established for the purpose of reviewing the adequacy of current elementary and secondary texts and curricula in health education with regard to blood pressure and the circulatory system. The group should present recommendations for improvements and strategies to

accomplish these improvements. This group's function should be established by January 1974, and accomplished within 2 years.

12. A federally sponsored program within the new Health Resources Agency and the Community Health Services Administration should be established to provide instruction for health professionals in public education communication methods and interpersonal relationships. The Task Force makes this recommendation because health professionals are identified and trusted by the public as sources of health guidance; unfortunately, these health professionals have seldom received the necessary training in public education. This program should also encourage institutions which train health professionals to add instruction in the educational process in their curricula.

    Health care providers should receive training and continuing education in the use of educational processes and techniques. A study and planning effort will be necessary to accomplish this recommendation. Particular emphasis upon the potential role of pharmacists has been identified as well as new models for patient education. The Advisory Committee should assume responsibility for this program.

13. The Office of the Secretary of Health, Education, and Welfare should support attention to high blood pressure in the enabling legislation and pursuant regulations for any national health insurance program which may be established. Certain costs associated with high blood pressure should be recognized, particularly those related to outpatient screening, diagnosis, management, and patient education services.

14. Additional research on the use by blacks of various mass media is necessary to determine more appropriate concentration of effort and design of message.

15. Continuing participation by all HEW health agencies should be assured in public awareness and education programs on high blood pressure. Presently, the office of the Assistant Secretary for Health, DHEW, would be the appropriate focal point for assuring these efforts.

16. The Task Force singles out for particular emphasis, in addition to other minority groups, the American Indians and that one-third of the U.S. population located in rural cities and towns. This report and its recommendations must not be satisfied with addressing the general public to the extent that these segments of the population not easily reached by popular approaches are overlooked or not appropriately targeted for emphasis. It is recommended that the Indian Health Services and those state and local Public Health Departments responsible to the rural population be represented with an advocate working at the highest levels of planning for the National High Blood Pressure Education Program.

Section 1

OBJECTIVES

The overall goal of the high blood pressure education program is to reduce death and illness associated with this condition. The effort expended in reaching this goal must be comprehensive and affect behavioral change as well as producing an increased level of awareness of the significance and seriousness of high blood pressure as a health problem.

To achieve the primary goal of the education program, the Task Force has determined that the following subgoals must be attained:

1. The public must be made aware that high blood pressure/hypertension is a serious and significant health problem in the entire population.

2. Public acceptance must be achieved of the need for regular blood pressure measurements.

3. The public must comprehend the fact that "feeling well" does not preclude their being at risk.

4. The public should understand the severity of complications resulting from high blood pressure.

5. The public must be made aware that high blood pressure can be controlled for most people.

6. The public should be motivated to seek and continue therapy and to seek ways of making the health care system responsive to the need for available treatment and monitoring.

Reasonable and measurable objectives for evaluation of progress of the National High Blood Pressure Program are the following:

1. Compared to the previous survey, subsequent surveys of national samples should demonstrate a 20-percent reduction in the number of persons known to have high blood pressure who are not under current therapy.

2. Subsequent surveys should demonstrate an increase over the previous survey in the number of persons aware that they have or have had elevated blood pressure and an increase in the number of persons who have had their blood pressure checked within the past 12 months, and an increase in the proportion of those continuing to take medicine for their blood pressure.

3. Subsequent surveys should demonstrate an increase of 20 percent over the previous survey in the number of persons aware that hypertension is often asymptomatic and can cause other important diseases.

4. Subsequent surveys should demonstrate an increase of 10 percent over the previous survey in the use and credibility of employers and unions as sources of health information.

5. Develop in fiscal year 1974 (within the Department of Health, Education, and Welfare) a high blood pressure Resources Development and Information Center and, related to this Center, consultation teams to: assist development of community-based high blood pressure detection and control programs; gather, collate, and circulate technical and general information on high blood pressure; and support and undertake educational research and materials evaluation.

6. Establish each year, through the efforts of the consultation and development team, at least three operational, community-based, locally supported High Blood Pressure Control Programs.

7. Through the efforts of the National Advisory Council on Hypertension, motivate federal, state, or local governmental departments and agencies, industries, professional organizations, voluntary agencies and other groups, either separately or in concert, to establish locally supported high blood pressure control programs.

8. In 1974, establish within the Department of Health, Education, and Welfare and other federal agencies a continuing employee disease prevention and health monitoring system, including blood pressure measurement and education.

9. Within 1 year, broadcast in prime time on a national TV network a health test emphasizing high blood pressure. This test must include an evaluation methodology such as a return of test results from identified household samples.

10. Accomplish, within 2 years, a review of primary and secondary health texts and curricula to determine adequacy of blood pressure and circulatory system instruction. Recommendations and findings will be published.

11. Develop an interagency program — among the National Heart and Lung Institute, the National Institute of Occupational Safety and Health, the Department of Labor, and various private interests — to stimulate employee and union high blood pressure education programs of sufficient quality to counter the current low usage and credibility of these sources for health information.

12. Check the validity of radio and TV as a significant health information source, especially for blacks; also, is the information offered valid?

Section 2

ASSUMPTIONS

Community health education serves two functions: producing change to benefit the health status of the community, and eliciting behavior likely to lead to that change. For the purposes of this program, the desired change in health status is a reduction of the mortality and secondary morbidity associated with hypertension. The types of behavior leading to this change have five general categories: (1) preventive action; (2) early detection; (3) appropriate entry and use of the health care system; (4) reinforcement of therapy maintenance; and (5) assisting the arousal of community interest in establishing local mechanisms to bring about the necessary behavior changes.

No primary prevention is known for hypertension; control of body weight and periodic blood pressure checks appear to be the only tools available. The initial focus for this program, therefore, clearly lies with an active and vigorous educational program to lead people into the habit of having blood pressure checked at regular intervals for early detection of hypertension. Each person must be made aware that he may have elevated blood pressure even though he feels well. To achieve early detection, however, the population must know how to enter and use the health care system. They must know how and where to seek care, the role of various professionals (particularly allied health professionals), and the nature of the risks and sequelae of untreated high blood pressure.

For persons identified as having elevated blood pressure, our major educational task is to instruct them in the various aspects of hypertension and to reinforce that instruction to increase the likelihood that they will obtain optimum maintenance of their therapy. Patients must be informed that they are susceptible to the serious complications of uncontrolled high blood pressure and that these can generally be avoided with appropriate treatment. In this regard, community education is not intended to provide the initial instruction which should be highly individualized. Rather, the effort should be made to promulgate a general message reinforcing the essential elements of the educational message and

supporting the concept that instructions proffered by health professionals should be followed rigorously. In addition, patients should be instructed to ask questions regarding their condition and treatment until they have a thorough understanding of the reasons for their particular regimen, including both primary results and anticipated side effects.

An additional effort required of the National High Blood Pressure Program is the arousal of interest in communities to establish locally operated mechanisms to achieve these behavioral ends. This step, as well as each of the others, will require close and continuous coordination with related efforts in professional education. Stimulation of community interest is of little benefit if the health care system is not prepared to respond with new approaches.

This latter point is of particular concern to the members of Task Force III as it relates to proposed plans for community education and information directed toward minority groups, particularly blacks and the Spanish-speaking population. The Task Force is unified in its belief that society is obligated to deliver effective health care to the entire population.

A health system must be developed which guarantees that the delivery of health care shall be assigned to persons who are sensitive, perceptive, knowledgeable, and concerned. Basic respect for the individual for whom these services are designed should be the foundation for programs, projects, and action guidelines. This can be accomplished only if the talents, skills, contacts, and knowledge of a diversity of backgrounds permeate every level of responsibility and authority for the activities proposed. Priorities for program planning at the national level and particularly at the local level should emerge from and include those to be served.

A community hypertension control program is unlikely to achieve success until it is perceived as a high priority need in that community by all concerned — professionals and laymen.

Section 3

STATEMENT OF THE PROBLEM

Approximately 23 million people in the United States have high blood pressure; only half are aware that they have the disease. Of those aware, only half are under treatment and only a quarter are under effective control.

Most forms of hypertension are without symptoms; thus the afflicted individual is unaware of his disease until symptoms develop from damage to specific organs, usually the brain, heart, or kidneys. A public conditioned to crisis-oriented care is not motivated to accept the seriousness of a symptomless disease, to take preventive action, or to adhere closely to treatment regimens.

The end result is an excessive number of persons with uncontrolled hypertension, an increase in economic loss to these individuals and to society, and for many a decrease in the quality of life.

The only existing, nationally coordinated community education effort directed toward hypertension is that of the American Heart Association. But, with the limited resources available to this dedicated organization, it cannot accomplish the task alone.

NATIONAL HIGH BLOOD PRESSURE INTERVIEW SURVEY

Under contract with Louis Harris & Associates, Task Force III has conducted a survey of individuals from a national sample of 3,800 households to determine public attitudes, specific knowledge, and health actions related to hypertension. Although analysis of the survey data is not complete, some information is available and is described in following paragraphs. (All currently available data tables are included in the Harris Survey Report under separate cover.)

Of the total sample surveyed, 80 percent reported themselves as having good or excellent health. In contrast, only 58 percent of persons reporting they have high blood pressure gave a similar report. Among blacks, 66 percent of all surveyed claimed excellent or good health; only 43 percent of black hypertension patients reported similarly.

Seventy-seven percent of the sample reported having had their blood pressure checked within the past 12 months, and 91 percent as having had a blood pressure check in the last 2 years. For blacks, the figures were 81 percent in the past 12 months and 95 percent in the last 2 years.

Twenty-four percent of the sample had been told at one time or another, usually by a physician, that their blood pressure was elevated. Of this group, approximately one-fourth were first told that they had high blood pressure within the previous 12 months. Among blacks, 34 percent had been told at some time that they had elevated blood pressure; for whites, the figure was 22 percent.

About one-fourth of the sample claimed knowledge of what was considered normal blood pressure for their age as did 40 percent of hypertensive patients in the sample.

A particularly important finding is the report that only 39 percent of those surveyed thought it very likely that one could have hypertension without symptoms. Even among hypertensive patients in this sample, only 50 percent thought that high blood pressure is very likely to be asymptomatic. Little difference was evident between blacks and whites in responding to this question.

In contrast, those surveyed appear to have somewhat greater knowledge that hypertension can cause other illnesses. Fifty-eight percent of the total sample and 63 percent of hypertension patients were aware of complications. Strokes, heart attacks, and other diseases related to the vascular system were most often identified as likely to be caused by hypertension. Of the total sample, 32 percent expressed the belief that emotional pressure and anxiety were likely causes of high blood pressure; 25 percent considered dietary factors as the most important likely cause of the disease.

When asked about treatment for high blood pressure, a majority of those surveyed knew that drugs were available to lower the blood pressure — 82 percent of the total sample and 90 percent of hypertension patients. In significant contrast, however, only half of those currently taking medication or who had been told they had hypertension felt the medicine was a good value in relation to its cost.

Eighty-three percent of the sample recognized that treatment must continue. Of those persons who had been told they had high blood pressure, 70 percent reported having taken medicine for it at some time. Of these, two-thirds reported that they are still taking medicine. This figure ranged from about one-half in those under 35 to over 80 percent in those over 65. Of those who stopped taking medicine, 62 percent said it was because their doctor instructed them to do so.

Physicians and clinic workers were identified by all groups as the primary source of health and medical information. Also rated high (cited by over 50 percent) were public service messages on television, health articles in magazines, medical columns in newspapers, and medical news stories on television. A significant black/white difference noted was a higher rating by blacks of television and radio advertising by drug companies and by food companies. More college graduates, women, and persons under 50 tended to cite a large number of sources.

Those surveyed rated the reliability of health information sources as greatest among physicians and clinic workers (the number identifying the source divided by the number using that source). Government publications on health and pharmacists or druggists were ranked moderately high. Heart Associations, Blue Cross, and health courses taken in school held middle rankings. A wider distribution of appropriate messages from these groups is warranted. Information furnished by unions and employers was both least used and least trusted.

Based on the results of this survey, it seems likely that the public will accept the message that hypertension is an important disease which can cause other illnesses. A large majority (77 percent) of people report they had their blood pressure measured during the last 12 months, and therefore education and follow-up are essential. Emphasis must be placed on the fact that hypertension is often without symptoms, that blood pressure must be checked frequently, and that the value of treatment is high. The values of normal blood pressure ranges can be stressed. Significant effort will be required to involve employers and unions as promulgators of health messages and to increase the credibility of these sources. A potential dependence by the black community on radio and TV drug advertising as a source of information must be further investigated and steps taken to ensure the accuracy of the information provided by this source.

It should be realized that the survey obtained responses from a large majority of the sample (70 percent), yet results in the 15 percent who refused and the 15 percent who could not be reached even with at least three call-backs might have been quite different from those of the 70-percent majority.

PROBLEMS RELATED TO REACHING THE GENERAL AUDIENCE*

The Task Force has adopted the premise that "general public" is not an adequate description of the audience for a health message. Because this Task Force considers high blood pressure to be a public health problem as well as an individual medical problem, it has elected to develop its planning on the basis of the question, "What groups within the population have the greatest number of persons at risk?"

Previous experience in epidemiological, as well as clinical, studies has permitted identification of certain population groups as being subject to higher risk of high blood pressure than other groups. These individuals obviously include patients already known to have hypertension.

A second large category of potential patients may be identified from certain minority groups who (not because of the minority, per se) have a much higher prevalence rate of hypertension. These potential patients include the blacks, Spanish-speaking groups, and American Indians.

A third large group of patients may be identified from certain medically high-risk groups. These patients include those who are pregnant, are diabetic, have gout or hyperuricemia, are heavy smokers, have high cholesterol or hyperlipidemia, have a family history of hypertension, have had intermittent elevations of arterial pressure (borderline or labile essential hypertension), or who have systolic pressure elevation (young or elderly).

Following paragraphs examine the problems faced by these high risk groups.

PROBLEMS RELATED TO REACHING BLACK AND SPANISH-SPEAKING COMMUNITIES AND RURAL AMERICAN INDIANS**

The traditional means for obtaining information for planning among black and Spanish-speaking communities have not produced optimal results. The survey format is often resented, partially because results are seldom reported to the community and because change in the services seldom occurs as a result of

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* See Appendix B.

** See Appendix A.

the surveys. Residents often feel the work of outside planners does not relate to the identified health priorities of a community. Follow-up actions are unavailable or not readily accessible to large segments of these communities. Expectations are raised but seldom met. Furthermore, suspicions may be raised because of the manner in which information is presented and the implication that prior knowledge of the health problem was not available. "Why now?" is a question that must be answered among these groups.

A large segment of these groups lacks the finances to secure medication and health care, particularly preventive health care. Communities often do not have accessible treatment facilities or transportation to existing health facilities. The majority of health services now available to these groups are fragmented through clinics and emergency rooms, thus making effective management difficult.

Few health programs give serious consideration to searching for productive ways of reaching segments of the community who are not in the mainstream of the health system. It has also been reported in the literature that people are influenced in their actions by: (1) persons they admire or wish to emulate; (2) persons with whom they have an empathetic or common experience; and (3) persons having prestige, attention, or status. In spite of this, the majority of health programs and health education efforts for blacks are designed by middle-class whites who may not have access to the black communication linkage system. The traditional approach emphasizes newspaper articles, posters, booklets, and television and radio programs which have not had input from the target audience.

It must also be recognized that the leadership identification process used by whites may vary polemically from that used by blacks and by Spanish-speaking communities. One of the major premises of the approaches recommended by this Task Force is based on the fact that leadership is a quality that may be found in all sections of a community. The Task Force believes that, if all segments of the population are given information, leadership will emerge from within these segments.

At this point, more information regarding the Spanish-speaking persons who will be reached seems necessary. It is a certainty that Spanish-speaking persons will want and need to make certain adaptations which may more accurately reflect their style and value system. Marked differences may occur between the Puerto Rican-Carribbean influenced culture and the Texas-Mexican influenced culture.

Some similarities exist, however, between significant segments of the black and Spanish-speaking groups:

Both groups may be affected by stereotypes held by nongroup members.

Both are economically inadequate and therefore set priorities in orders different from those set by other group members.

Both have a growing recognition that present institutions do not adequately serve their needs (schools, hospitals, etc.).

Both acknowledge the importance of religion as a focal value.

Both are affected by the tendency of nongroup members to correlate income and color with class and group status.

Both groups often consider hospitals as a last resort.

Both tend to rely on self-medication which is more often correlated with economic necessity than folk beliefs.

Both are inclined toward belief in God to heal, treat, cure, and prevent illness.

The problem of hypertension among the American Indian population is greater than among the general (caucasian) population. Indeed, the prevalence of high blood pressure falls intermediate between the black and white populations.

The already stressed work of the U.S. Public Health Service (through the Bureau of Indian Affairs) will be further stressed. At present, like many other sectors of our health care delivery in this country, the Indian Health Service reacts primarily to acute and emergency health care. This must be corrected.

Those persons not receiving health care through local Indian Hospitals should be appraised of the problem directly through their local tribal council governors, etc.

Health care on reservations and in localities where large groups of Indians live are grossly deficient in medical care; this problem of hypertension prevalence among the American Indian population is totally unrecognized by the practicing physician and epidemiologist. Therefore, further studies into this problem and prompt evaluation, detection, and treatment programs should be immediately undertaken.

PROBLEMS RELATED TO REACHING MULTIPLE-RISK-FACTOR GROUPS*

In this area, our concern is with those individuals who have hypertension coexisting with other factors which increase their health risks, as opposed to those who have normal blood pressure or those with similar levels of elevated blood pressure but who do not have additional risk factors.

High priority for educational efforts should be directed toward hypertensive persons with cardiovascular or renal disease, those with high blood sugar, and those with high levels of blood cholesterol.

Smoking is an additional risk factor for many diseases, and hypertension is no exception.

Hypertension may predispose affected individuals to more rapid progression of hardening of the arteries.

Control of elevated blood pressure in pregnancy is of concern to prevent toxemia and attendant premature birth, or fetal, prenatal, or maternal deaths.

Insurance companies have provided data and made us aware of the seriousness of excess body weight associated with high blood pressure for quite some time; persons with obesity show an increased mortality rate when they also have high blood pressure.

In the past, young people as a group have generally been omitted from educational or detection efforts for high blood pressure. The benefits of early detection and the educational potential in this group make it desirable to initiate specific educational programs for them. Periodic measurements for young persons at special risk of developing high blood pressure must be emphasized (e.g., young people with family histories of high blood pressure, labile blood pressure, overweight, diabetes).

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* See Appendix B.

PROBLEMS RELATED TO REACHING IDENTIFIED HYPERTENSIVE PATIENTS*

Many health behavior problems exist with hypertensive patients. Some of the most classic are these:

Patients who, after leaving the doctor's office, do not have their prescriptions filled.

Patients who do not follow their daily medication schedules.

Patients who do not make or keep follow-up appointments.

Patients who do not have their prescriptions refilled.**

An additional problem was evidenced by the studies of Schoenberger in Chicago and Wilber in Atlanta. These studies have shown that a large proportion of newly discovered hypertensive patients in the offices of cardiologists and internists were not given a second appointment.

It is indeed very difficult for patients to change living patterns — to stop smoking, to follow a diet, or to get regular exercise.

In a group of hypertensive patients who discontinued their clinic appointments at Henry Ford Hospital Hypertension Clinic and later showed up at the emergency room, 39 percent had quit medicine because they felt better, 36 percent did not understand instructions, 33 percent because of lack of family support, 10 percent because of dissatisfaction with the clinic, 7 percent because of side effects, and 7 percent because of discouragement with treatment.

In the recent Harris Survey, of 34 percent who stopped taking medicine, 62 percent reported the doctor told them to stop, 24 percent did not feel they needed the medication any longer, 3 percent stopped because of side effects, and 13 percent stopped for "miscellaneous" reasons.

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* See Appendix C.

**In Baldwin County, Georgia, in 1961, Dr. Wilber found patients that stopped taking their medicine for high blood pressure regularly did so because: (1) they felt better (30%); (2) it was too costly (16%); (3) they took it only when they "needed" it (16%); and (4) other reasons (36%).

There are a variety of barriers — some known, many perhaps unidentified — which prevent or delay the accomplishment of the basic goals of the program. For some minority groups, minor language barriers may be a problem. But the major overall barrier is lack of understanding and communication between patients and physicians.

The end result is that the patient continues to live with a disease process without being motivated to make any lasting change in his behavior to improve his health status.

A large proportion of the people in the United States can afford the cost of appropriate management for their high blood pressure. However, those at the lower end of the socioeconomic scale cannot afford the cost of drugs, laboratory studies, or doctor's fees. Many of the poor have great difficulty in getting to the clinics even when fees are not involved. Therefore, some of the important factors identified as responsible for the poor detection and follow-up of persons who are not economically able to afford private care are the following: (1) financial and other constraints to access to care for the working poor; (2) poor doctor-patient relationships (communications and respect gaps); (3) inaccessibility of accurate health information and the resulting lack of understanding of the nature of high blood pressure; (4) long waiting periods and lack of continuity of physician contact; (5) complicated treatment schedules; (6) poor follow-up; and (7) side effects of antihypertensive agents.

PROBLEMS OF HIGH BLOOD PRESSURE IN RURAL AREAS

Health care delivery in rural and farm areas remains a continuing and thorny problem in total health care delivery concerns in the United States today.

Therefore, since approximately 35 percent of our population lives in this environment, methods of hypertension, detection, and screening in these areas of the country is perhaps as important as problems in the inner city.

Since we have yet to come to grip with the total problem of rural health care delivery, considerable attention must be directed by new study groups into the implementation of the Program's goals among our rural population.

Section 4

COMMUNITY RESOURCES AND THEIR FUNCTIONS

It is clear that centralized, federal efforts alone cannot achieve the necessary degree of community education required to accomplish the intent of the National High Blood Pressure Information and Education Program. If this Program is to be brought to fruition, most of the planning, funding, and activities must be accomplished within local communities across the nation.

Although many factors must be considered in stimulating and coordinating local action, a logical and necessary first step is the identification and involvement of a variety of community leaders in such a program. Therefore, the identification of human resources is of paramount importance.

Toward this end, Task Force III, in a community education development workshop* in Atlanta, Georgia, verified a series of guidelines for planning local programs (Table 1) and pursued the identification of local resource groups for community high blood pressure education programs (Table 2). Both the guidelines and the list of resource groups are general and not intended to be exhaustive or specific for any given community. Rather, this material is offered as points the Task Force believes will, if considered by local groups, assist their planning.

SPONSORS

Sponsors of community high blood pressure education programs include the wide variety of persons and organizations required to plan, implement, and evaluate programs. In addition to assuming major leadership responsibility for initial planning, ongoing coordination, and outcome evaluation, they must also provide funds or actively assist in locating funds for program support. Sponsors

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* See Appendix D.

Table 1. Guidelines for Planning Local Hypertension Control Programs*

1. Any effort which is initiated should be self-sustaining for at least 10 years.

2. Insofar as possible, it should choose existing system elements rather than require development of additional new elements. This condition is not meant to imply that changes may not be made in the current system.

3. The action program must be accomplished essentially from local resources and with a minimum of federal support.

4. Any action undertaken should be designed not to treat hypertension as an isolated entity, but as the first step in an overall preventive care program dealing with major health issues.

5. All persons — consumers and health professionals — who are to be involved in the program or served by the program should participate actively in the planning effort.

* See Appendix E.

Table 2. Principal Resource Groups Identified*

Sponsorship	Public Education	Delivery System
Medical societies	Local radio and TV stations, top management and public service directors, and local newspapers	Local Health Department
Insurance companies	Peer group paraprofessionals	Local news media
Local health departments	Local Heart Association	Medical Society
Heart Association	Community service organizations	Heart Association
Community hospitals	Employers	Private physicians
Health maintenance organizations	Local medical society	Occupational health areas
State Health Departments	United Way agencies	Churches
Local major industry	Local advertising executives	Community movers
Local community organizations such as: service clubs, Urban League, United Way, Chamber of Commerce, PTA's, Y's, Grange	Corporations large enough to have public relations departments; e.g., public utilities	CHP (314) "A" and "B" Agencies
Union locals	Learning resource centers.	Clinical directors for audiovisual input
		Health profession schools

* This list is not exhaustive; participants in the Task Force III Community Education Workshop identified some 50 other resources (see Appendix D). The above were noted to have greatest potential, experience, manpower, and other resources available to accomplish the purposes of a community-based high blood pressure program.

have the added benefit of lending prestigious name or image to the program with the objective of securing both community response and funding support.

Medical Societies

Medical societies should be involved in planning, utilized as communicators to private practitioners, and asked to serve as authoritative bodies in community health endeavors. Their support will be through volunteer efforts in planning, screening, and care of persons without third party resources. They may serve as coordinators of programs or certain aspects such as an appointment reminder system, a registry, or nutrition and health education. They may sponsor a patient referral program for new residents or the medically indigent.

Life and Health Insurance Companies

Life and health insurance companies should be involved in planning to develop programs of insurance for preventive services and appropriate payment for patient educational and care services by allied health personnel. They should support education and screening and health monitoring for their own employees and in communities to emphasize the value of preventive health measures. Special effort should be made to include minority insurance companies. Information from major insurance companies describes several major issues pertinent to the high blood pressure information and education program:

a. A higher premium must be paid by hypertensives. Of all increased premiums, 40 percent are because of high blood pressure. Some major insurance companies permit some reduction in the higher premiums paid by hypertensives if they show evidence of control by treatment for a period of time (e.g., 2 to 6 years).

b. Insurance companies do not initiate the reviews necessary to lower premiums. The stimulus comes most often from the patient and sometimes from the doctor. Some companies refuse to reconsider an individual for a lower rating despite a controlled blood pressure.

c. Usually, a blood pressure of 140/90 or greater (see Appendix E for variations), verified by an average of three measurements, qualifies a candidate for increased premiums.

d. The insurance companies encourage early treatment for high blood pressure; they feel that it is extremely desirable and does in fact reduce morbidity and mortality.

e. The public could benefit from educational efforts pointing out the increased costs of life insurance associated with low-level hypertension (see Appendix E).

f. Paramedical personnel are used by some insurance companies in some routine examinations. Paramedical personnel are well accepted by the patients and are a source of reliable information. Some industries are using paramedical personnel for screening and follow-up care.

g. The medical director of one major insurance company indicated that 95 percent of high risk persons can be identified by a medical history and five simple tests: height, weight, blood pressure, pulse, and urinalysis.

The Task Force calls attention to Section 7 of the Insurance Study contained in Appendix E:

> "The rates of the major insurers and reinsurers are generally based on the mortality figures derived by the 1959 Build and Blood Pressure Study of the Society of Actuaries. This study was based on the experience of 26 insurers and included the histories of nearly 4,000,000 individuals insured between 1935 and 1953. However, this study did not measure the effects of antihypertensive treatment on mortality, as effective drug treatment procedures were not available during that time span. To fill this gap and to discover possible changes in mortality during the past 20 years, the life insurance industry is planning a new study to replace the 1959 work. This study will be the joint responsibility of the Association of Life Insurance Medical Directors of America and the Society of Actuaries."

Local Health Departments

These groups should be involved in planning in their role as evaluators of need, priorities, and results, and as providers of care for certain groups and of special services such as nutrition education, registries, vital statistics, and laboratory tests. Within priorities, they can provide funds or assist in identifying sources of funds for special programs.

Heart Association

The Heart Association should be involved in planning in its role as initiator, communicator, coordinator, and provider of educational and special services. Until recently, the Heart Association was the only agency engaged in promoting public education in hypertension.

In 1969, hypertension was selected by the American Heart Association as a program for increased emphasis. Risk factor screening programs, including blood pressure measurement, have been initiated by many chapters around the country, and a risk factor screening guide has been developed and is currently being revised.

The new emphasis in public messages of the Heart Association about high blood pressure is "There are no constant symptoms." The Heart Association has developed a series of public service messages on high blood pressure using a pleasurable emotion — mild comedy. It has been found that a message based upon fear may immobilize some people.

A public education film, "What Goes Up," designed to get the general public to have their blood pressure measured, has had wide use. Other educational materials are readily available.

The leadership and organization of the American Heart Association and its local chapters is a vital link in a National High Blood Pressure Information and Education Program. Coordinated and cooperative efforts must receive top priority.

Community Hospitals

The administrative and professional staffs of community hospitals must be involved in planning to develop a broader concept than that of providing services for emergency and acute care. Linkage with outpatient and industrial health clinics and community health outreach service is essential in an integrated community approach to the health of its citizens. The hospital may provide clinic, diagnostic, and laboratory facilities and serve as a center for educational materials and programming.

Health Maintenance Organizations

HMO/Group Practice (prepaid) organizations must be involved in planning. They have the potential for preventive care, acute care, and health maintenance programs for defined groups in the population. The ability to evaluate effectiveness of programs is particularly significant. Demonstration of systematic approaches, training and educational services, and special services to other practitioners and their patients are within the potential of these organizations. They have a full-cycle role — planning, developing, providing, and evaluating.

State Health Department

The State Health Department must be involved in planning in their role of administrator of programs, funding resources, licensing authority, legislative contacts, and skills in planning and evaluation. They may be able to provide funds, consultants, laboratory services data, educational materials, and some health care services, particularly in rural or isolated areas.

Local Major Industries

Local industries, unions, and employee associations should be involved in planning, educational programs, and health monitoring; the larger associations can be involved in direct health care services. In the opinion of the Task Force, these organizations, particularly large industries and unions, have a valuable experience and a great potential for expanding efforts in high blood pressure education, screening, health monitoring, and even management.

Community Organizations

Service groups in communities are frequently looking for community projects. They can provide valuable communication channels, assist in educational and screening efforts, and provide services such as transportation for patient care.

PROVIDERS OF EDUCATION AND INFORMATION AT THE COMMUNITY LEVEL

As developed by the members of Task Force III, the tasks of health education are:

1. Assist health professionals to understand, design, and use the educational process in meeting the needs of the community.

2. Assist the community to understand and participate in the educational process, including program planning and materials development.

3. Develop, produce, and promulgate supplementary education materials for a variety of audiences.

4. Work with the local school systems to develop behavior-oriented health curricula.

5. Identify and involve community leaders having influence among significant portions of the populations.

6. Inform the community about special events.

7. Provide technical expertise in communications, education, and community involvement.

For general public education, those resource groups listed in Table 2 are considered to be of particular importance.

Patient education is the direct responsibility of all health professionals and allied health personnel involved in screening and/or treating individuals.

Task Force II has made specific recommendations for education of the patient with high blood pressure who is obtaining care on a regular basis. As described earlier, however, a significant number of persons who know or knew at one time that their blood pressure is or was elevated are not continuing under appropriate care. These people comprise one of the target groups addressed by Task Force III.

Providers of public educational efforts as listed in Table 2 can broadcast the message to reach these persons, but additional direct efforts by knowledgeable or potentially knowledgeable persons with whom they have frequent contact have more likelihood of success in changing them from persons with uncontrolled high blood pressure to persons with controlled high blood pressure. Educational programs — sponsored at work, in schools, in churches, and among families with members who have high blood pressure — for dentists, pharmacists, optometrists, disc jockeys, barbers, beauticians, and bartenders may have a particular impact by reaching the asymptomatic person with high blood pressure who rarely, if ever, goes to a doctor or other medical clinic for a check-up. These same groups can

help individuals known to have high blood pressure by frequent reminders of the benefits of staying on the medicine and keeping their appointments.

Educational methods are essential tools which must be provided and updated for all health professionals and allied health workers. Task Force II has developed detailed recommendations for meeting this requirement. Certain groups such as dentists and pharmacists have already indicated strong interest in expanding their roles into high blood pressure by providing patient education and screening.

PROVIDERS OF HEALTH CARE

Among the providers of health care, groups of persons were identified to provide the following services:

a. Lead and coordinate an ongoing continuing-education effort for a variety of health professionals, patients, and the public based on assessment of practice (not on assumptions) to determine educational need.

b. Identify and activate all resources for detections, education, referral, and treatment within the existing system.

c. Provide manpower and equipment for special programs.

d. Provide technical expertise and consultation in detection and patient care methodology.

Of primary importance in the delivery of education and service are those described in the paragraphs below.

Medical Societies

Medical societies can serve as authoritative communicators to private physicians, and their support lends soundness and credibility in the eyes of the public. They may sponsor continuing education efforts. Medical societies may also support and recommend to private physicians the use of physician assistants.

Private Physicians

Private physicians are important in their role as principal providers of health care to patients with high blood pressure and their potential for awareness of the special needs of patients. They also have a special support role in volunteering services for medically indigent who are ineligible for other sources of support for care. The public in the Harris Survey reports the physician to be the principal and most reliable source.

Local Health Departments

Community health education is a primary role of local health departments. An additional role is to provide health care for certain groups of patients. They have the potential to provide support for continuing education for health professionals and allied health groups. Local health departments also have a role in supporting licensure of physician assistants.

Heart Associations

The Heart Associations (AHA and other agencies) serve a critical role as coordinators, leaders in public continuing education, and providers of special counseling and patient education services.

Health Councils

Industry and the Industrial Health Council have a role as providers of health care with their great potential for periodic educational and screening efforts and through industrial medicine departments and staff providing health monitoring and care.

Health Maintenance Organizations

HMO's have a primary and self-evident role as providers of health care. We recommend that they develop an active role in the area of hypertension education.

Media and Community Organizations

The media and the various community organizations and businesses have roles of enhancing awareness by providing repetitive contacts with the message. They may offer primary influence to potential sponsors and health care providers. Any efforts by business, community or organizations may best promote a High Blood Pressure Education Program by offering inhouse education, screening, and evaluation as a model prior to taking the promotion to the public.

Section 5

PROGRESS REPORT AND ACTION STEPS

In the previous section, individuals, groups, and organizations have been identified with specified or potential roles in community high blood pressure education programs. In this section, current and proposed messages are presented as well as the proposed strategy of action steps to deliver the messages.

SUMMARY OF ACCOMPLISHMENTS

In early November 1972, on the approved recommendation of Task Force III, the Office of Communications and Public Affairs of the Health Services and Mental Health Administration accepted leadership responsibility for developing audiovisual materials for the public information campaign of the National High Blood Pressure Education Program. The recently formed High Blood Pressure Information Center located within the National Heart and Lung Institute is the current focal point within the federal government for coordinating all public and professional information and education activities of the Program.

The objective of the public communication plan is to create an awareness of the prevalence of high blood pressure, its seriousness, the ease of detection, the effectiveness of treatment available for controlling it, and the need to follow prescribed therapy. Further, it will endeavor to provide support for community efforts to change attitudes and behavior of the public to seek periodic measurement of blood pressure and for those with high blood pressure to accept treatment and be motivated in its maintenance.

Resources allocated for the first phase of this program have been approximately $360,000, plus the services of five full-time public affairs staff members at the National Heart and Lung Institute and the Health Services and Mental Health Administration and significant part-time contributions from 17 other Health Services and Mental Health Administration programs and Regional Offices.

Specific messages which have been developed and are now being used for the general public are the following:

"High blood pressure is a serious condition. It can lead to strokes, heart failure, serious kidney problems, and often early death."

"Millions of people have it — at least one in every ten people. It can strike young and old, people of all races. Someone very important to you may have it."

"Many do not know they have high blood pressure because it is generally asymptomatic in its early stages."

"It is easy to detect. A blood pressure test is inexpensive, quick, painless."

"It can be controlled. You can lead a normal life. Simple treatment can generally bring your blood pressure down."

A second message, aimed at diagnosed hypertensives, stresses the dangers of untreated high blood pressure and also provides specific information on how to live under treatment for high blood pressure. This message contains the following elements:

The consequences of untreated high blood pressure.

The treatment for high blood pressure — including drugs, diet, and psychological aspects.

The cost and personal problems associated with a treatment regimen.

The risks of neglecting treatment measures.

As of June 30, 1973, the following activities have been completed or are underway:

a. Development of a logotype for the National High Blood Pressure Education Program and its adoption by numerous private as well as federal participating organizations.

b. Widespread and accelerating attention to high blood pressure in news media, both nationally through network television/radio and magazines and locally through extensive news coverage of such events as the Hypertension Workshops held in San Francisco, Atlanta, Philadelphia, and Chicago, for which advance and post-meeting public affairs support was provided.

c. Development of screening exhibits on high blood pressure and their use in a wide variety of settings (professional meetings, a state fair, federal office buildings, etc.).

d. Development of a 28-minute videotape and film on hypertension activities in various communities.

e. Two brochures produced and initial distribution underway.

f. 60-, 30-, and 10-second radio spots produced and initial distribution underway.

g. 60-, 30-, and 10-second television spots produced and initial distribution underway.

h. Brochure and radio spots in preparation for black and Spanish-speaking audiences.

i. 30-minute color film produced. Arrangements underway for premier showing on network television with follow-up local and cable TV, civic, federal, and special distribution for black audiences.

j. Second film in preparation.

k. Other brochures, posters in preparation. Submitted for approval.

In addition, many activities, supportive of both phases, have been accomplished through collaboration between the Health Services and Mental Health Administration team and other federal and private efforts, and through independent but parallel efforts. These have included TV/radio documentaries, spots, appearances on networks and major local stations of author Lawrence Galton, Dr. Theodore Cooper, Dr. Frank Finnerty, and others; news coverage in Sunday supplements in the New York Times, Time Magazine, etc.; lead articles in Readers' Digest and Ebony; and entire issues of Medical Opinion and Urban Health.

Exhibits, brochures, pamphlets, and screening displays are in constant use on request from civic and professional groups through the National Heart and Lung Institute's High Blood Pressure Information Center.

ESTABLISHMENT OF A RESOURCES DEVELOPMENT AND INFORMATION CENTER

As recommended by Task Force III as well as other Task Forces, a National High Blood Pressure Information Center was established in March 1973 within the National Heart and Lung Institute Office of Information. Initial activities include setting up a Speakers' Bureau, providing for distribution of pamphlets prepared by the Health Services and Mental Health Administration and information leaflets for the program, and scheduling and staffing exhibits at national or regional meetings. Publicity is being developed to urge people to telephone or write the Center for information regarding high blood pressure and the National Program.

It is recommended that this continuing operational group should be expanded to a Resources Development and Information Center and that it should have the following functions:

a. Gather and disseminate information about high blood pressure and high blood pressure programs to lay and professional persons and groups. This activity is seen as an active outreach program, not a passive office responding only to spontaneous requests.

b. Provide for public information and scientific information storage and retrieval.

c. Coordinate the development of program materials.

d. Include Program Development Consulting Team(s) on staff.

e. Provide administration for support grants, of 1 year only, at approximately a $25,000 level to communities for the purpose of initiating coordination and planning of the programs.

f. Provide for the development, updating, and evaluation of public and professional educational materials.

g. Provide a continuing program of public awareness.

h. Provide a communications link among community high blood pressure programs.

In staffing the Resources Development and Information Center, particular effort should be made to include the following skills: media specialists, educators, health educators, technical information specialists and/or data storage and retrieval specialists, and medical consultants, as well as health planning and community organization personnel. Task Force III recognizes that support limitations and recruitment problems will require gradual development of this proposed team. Within limits, some of these skills may be acquired on a contract basis. However, Task Force III urges that an ongoing core group be assembled at the earliest possible date to begin the collection of information and initiate the development of personal contacts which will form the foundation of the operation.

MESSAGE DEVELOPMENT AND FUTURE ACTION

Public action is called for in that part of the plan which uses action-oriented messages for the general public. These messages must be designed specifically for adaptation and use in local screening and treatment programs. Building upon the awareness created in the general program, these messages will urge people to seek detection and treatment at specific local sites and to support efforts in community activation toward control of high blood pressure.

Special educational materials, kits for leaders and civic groups, training films for outreach workers, and other materials are already in various stages of planning and development. Most important will be the mechanism of communication workshops for regional, civic, city, and state health care communicators in mounting community action against high blood pressure.

Because public and community education in high blood pressure is a long-term activity encompassing many years, it is imperative that means and resources be found to continue to build upon the impetus of this "first wave" program of public awareness.

APPROACHES TO COMMUNITY ORGANIZATIONS AND COMMUNITY LEADERS

The phasing of the public awareness program with other aspects of this education effort is crucial. Awareness alone is not sufficient to stimulate the appropriate behavior patterns to benefit health. For various segments of the population, barriers to appropriate actions are complex, and the actions required may be more difficult; therefore, special messages and materials will be necessary.

Medical Societies and Private Practitioners

a. "Community action to promote control of high blood pressure will enhance the preventive efforts of physicians by assisting patients in following their physicians' therapy and counsel and by promoting improved communications between the physician and his patient."

b. "Planning efforts for a community program of high blood pressure education must enlist the early participation of private practitioners."

c. "A high degree of believability and therefore success of a community health effort and public awareness program is dependent upon the participation and support of the Medical Society and official health agencies. Particularly crucial is the specific support of the private practitioner and clinic staff in their authoritative counsel and dialogue with patients."

d. "Many physicians seem to be concerned about adopting an initial minimal diagnostic workup on hypertension patients. Medical Societies can help alleviate this concern by communicating and recommending to physicians the currently prepared guidelines. This action will reduce strain on the patient's budget (a potential barrier to return for care) and hasten the application of therapy to reduce blood pressure."

e. "Encourage private physicians to use trained health workers in their educational programs for patients."

Health Departments

a. "The support and voice of official agencies is significant in gaining public attention."

b. "Publicity on need, programs, and potential resources encourages the active participation of voluntary organizations, private practitioners, and the public."

c. "Education by example of high blood pressure education programs for government employees including legislative bodies may be particularly effective."

d. "Official agencies can provide leadership in working with rural and small communities with inadequate resources and in arranging coordination of services."

e. "Within current patient services programs, messages and services relating to high blood pressure can be added and integrated, with minimal difficulty and costs."

f. "Encourage positive messages to avoid any linkages with regulatory or fear-provoking messages associated with official agencies."

g. "Encourage use of volunteers in local health department activities."

h. "Emphasize communication with people in the educational process rather than merely the production of brochures, pamphlets, or news releases of statistics."

Heart Associations

a. "Affirm the valiant and significant frontier efforts of this organization(s) in the past relating to public education in heart and vascular diseases including high blood pressure."

b. "Service efforts need greater emphasis."

c. "Heart Associations need to include wider representation from the community."

d. "Initiate small, comprehensive, indepth grass roots efforts as models and demonstrations which can then continue to be expanded through other resources."

e. "Continue effective role as initiators, stimulators, coordinators."

f. "Train canvassers to provide an educational message personally, not just a brochure."

g. "Include high blood pressure education efforts in other clinic and cardiovascular educational programs."

Community Service Organizations

a. "Provide facts and evidence emphasizing the medical priority of community blood pressure control" (to persuade them to use this means to fulfill their need for a public service project).

b. "Provide training to give volunteers confidence in an educational role."

c. "Describe relationship with other health programs and describe plan to integrate a high blood pressure education program with other health programs in the community. Senior citizen groups particularly may be interested because of the large number in their own group who may have elevated blood pressure."

Employers

a. "Blood pressure education and services can reduce costs due to and related to morbidity, mortality, and insurance."

b. "Preventive care and educational programs require a repetitive daily awareness message which can effectively be carried out in working situations."

c. "Give out health messages in paycheck envelope." Medical clinic staffs of industry may be the most immediately available group with experienced paramedical staff providing screening and management for high blood pressure. For smaller industries without clinics and medical staff, the requirements of the Occupational Safety and Health Act of 1970 may stimulate cooperatively sponsored health services which should be urged to include blood pressure measurement and education and possibly health monitoring services for employees.

Pharmacists

a. "Educational services to the patient with high blood pressure will enhance the relationship of patient and pharmacist and, by resulting in better compliance with therapy, will benefit both patient and pharmacist."

SPECIAL CONSIDERATIONS FOR BLACK AND SPANISH COMMUNITIES

A successful approach to the black and Spanish-speaking communities requires acceptance and adherence to two concepts: (1) leadership is a quality found in all sections, at different educational levels and income; and (2) if educational courses and programs are presented to a variety of audiences, leadership will emerge.

Community leaders designated by traditional standards seldom reflect the true power leadership. The most effective way to identify leaders is to develop and present educational series on the subject to widely varying groups. Leadership will emerge from this approach.

The multiplier effect works well. The identification of persons with leadership qualities is different from assuming that the best-known person is a leader who can help with health awareness.

School education approaches also need fresh thinking. Contrary to the traditional method of contacting and trying to motivate an entire faculty and staff, efforts should begin with one interested staff member. One approach would be to visit the classroom and look carefully at the available texts and the curriculum for the grade level; the most vital information to be presented is listed. A sample lesson is taught for the teacher. Activities are developed for the students in every area — art, design, social studies, geography, language arts, drama, and music. Development of a basic approach such as this is usable from preschool through the university level — including medical schools.

The use of drama as a learning and educational mode has been observed in an African country which had a high rate of illiteracy resulting from colonial rule. The government used dramatic festivals to teach health, career choices, and the laws of the republic. From this background, the present educational use of drama evolved. It provides a flexible method which can teach facts in the setting which reflects the language, culture, and traditions of the specific section of community and country. These approaches must be explored and encouraged.

Developing and using the creative arts as a means for disseminating vital special health information must not be overlooked in working with ethnic and cultural groups.

Proposed action steps for black and Spanish-speaking communities are listed below, along with appropriate format suggestions for media:

a. Insert education units in health agencies' programs.

b. Design religious services with health workers serving as resource educators.

c. Design Sunday School and youth group literature to include examples of health actions correlated with moral teaching.

d. Teach career information related to the health problem being presented.

e. Identify acceptable representatives to teach information (e.g., beauty parlor operators to teach other beauty parlor operators).

f. Present, in overview form, the specific health problem as it relates to the total health care delivery system.

g. Always include program design in the public presentations on the subject by the participants of the course.

h. Use dramatic presentations* for teaching health problems and choreographic methods of teaching health facts.

i. Use alter ego adaptation or roleplaying in dialogue for attitudinal perceptions of problems.

j. Design public interest and radio messages based on a well known popular singer's rendition of a famous song.

k. Design format and content of educational messages based on recorded questions from group educational sessions.

l. Initiate sessions with listing of present level of knowledge acquired in short pretest (either cassette or written) to produce a positive aura for learning and assessing present knowledge.

m. Create audiovisual materials — combining films, slides, recordings, and lecture notes. It is vital that these be developed in conjunction with the professionals who can and will work with the designers and that members of the target group be intimately involved in both content development and presentation format.

n. Develop series for legislators and political leaders of the same group as the community being contacted.

o. Create appropriate printed materials which reflect sectional and geographic differences.

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*It is expected that the High Blood Pressure Information Center will be collecting (for distribution) materials of this nature.

Spanish communities are isolated from the main culture. They tend to read special Spanish newspapers and listen only to Spanish-speaking radio stations. Communication takes place within the community on an informal basis throughout a network of friends and relatives.

Health information to Spanish groups could be disseminated most effectively by Spanish field workers working in institutions and through Catholic and Pentecostal churches. Informal discussion groups with the use of audiovisual material in the Spanish language can be very effective. Special emphasis should be placed on bilingual health services where the knowledge acquired on health problems can be put into practice.

Action steps proposed specifically for Spanish-speaking communities are the following:

a. Improve communication between health workers and others by giving non-group members orientation sessions.

b. Utilize Spanish as well as bilingual speakers. Many Spanish speaking persons complain that only bilinguals are used in programs. Bilinguals might be used to train such speakers but there is little reason why they should not use persons with adequate knowledge but only one language skill.

c. Use Spanish songs with health information.

d. Design piñata information educational games for youth in and out of school.

e. Use fiesta and natural loci of group gatherings for information.

f. Attempt to include both priests and curanderos in the health information system.

SPECIAL CONSIDERATIONS FOR THE HYPERTENSIVE PATIENT

Many studies have demonstrated that the simpler the treatment, the more likely the patient is going to remain on therapy. The greatest compliance occurs with a one-pill-per-day regimen. According to the Harris Survey, 51 percent of those with high blood pressure and taking medicine for it are on a one-pill-per-day regimen. A recent study in an inner city population, where the 8-month dropout rate was only minimal, has demonstrated that in 70 percent of newly

discovered hypertensive patients, the blood pressure was brought to normal by a combination tablet of reserpine plus chlorthalidone (a pill a day). Reducing the number of pills also reduces the cost.

Drug-induced side effects, frequently from drugs the patient does not really need, also encourage the patient to discontinue medication and stay away from the doctor. The patient is either embarrassed to discuss the side effects, or he wants to please the physician by making a good report. Some patients find it easier to reduce or omit certain drugs rather than admit they did not take them. They reason that the physician will insist on their taking the drug in any event. In the Harris Survey about 15 percent of hypertensive patients reported side effects; but only 3 percent of those who quit taking their medicine volunteered that they stopped because of bad side effects.

An explanation of the medication and its side effects must be given. It should also be made clear at the outset of treatment that a variety of drugs are available and that if one regimen is troublesome, another can be substituted. Though these drugs are not perfect and research continues for improved drugs, the present agents have been proved to be beneficial by reducing strokes and death.

Patients, particularly the asymptomatic ones, will not remain under care and on medication unless they are properly motivated. Such motivation can only result from a good doctor-patient relationship. Recent experience with an inner city population has attested to the fact that a well-trained, understanding paramedical person may be substituted for the physician in this relationship. Once this relationship has been established, more time can then be spent in educating the patient and less is required for just reassuring him. Inherent in the cooperation of any human being in a long-term program such as that involving antihypertensive therapy is appropriate education. Irrespective of prior education, the patient needs to know what is wrong, what can result from lack of treatment, what goals are anticipated with treatment, and what complications might develop with therapy.

Most of us seek medical help only when we are ill or in pain. Patients and, unfortunately, physicians and clinics as well are more oriented toward emergency-crisis situations than prevention. The message must be communicated that patients should go to the doctor or to the clinic in order to stay well, not only when they are sick. Physicians must start to practice and teach preventive medicine, and patients must learn to request it.

The problem in the inner city areas is somewhat different since most of the population is not under a private doctor's care.* The message that hypertension is usually associated with no symptoms, that it is the major cause of stroke, heart failure, and kidney failure, that it is the commonest cause of death in blacks, and that these complications can be prevented by effective treatment must get to the community at all levels. If this message is to be understood, it must be told in simple, plain, understandable language, which reflects an understanding of the traditions and cultures of the populations by people they trust; and most important, the patient must have a source of detection, care, and follow-up available to him.

Every patient who goes to a physician's office, clinic, or emergency room for any reason should have his blood pressure taken. Currently, many specialists (psychiatrists, ophthalmologists, surgeons, etc.) do not even own a blood pressure cuff. There is no reason why dentists, optometrists, and pharmacists should not take blood pressures. Perhaps no other action by health professionals can more strongly emphasize the importance of blood pressure to the patient than a routine pressure measurement on every occasion a consumer visits any health professional.

Screening programs and regional treatment centers must be adapted for rural, farm, and Indian populations. It is most important that professionals and paraprofessionals can understand and relate to these groups.

In a recent survey conducted by a Washington, D.C., hypertension clinic in a city hospital, blood pressure determinations were made on 1340 hospitalized patients not on the medical services. Of these, 425 were found to have blood pressure over 140/90 mm Hg; less than 200 of the patients knew it; and only 45 were under satisfactory therapy.

The once-identified hypertensive patient must be reidentified, re-educated, and motivated to obtain treatment. Although the proposed intensive information program using standard techniques will reach many, special efforts must be made to reach the high risk and minority groups. The message must be in a language they understand, and it must be disseminated by people they trust.

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*The data from the Harris Survey states that 85 percent of those interviewed reported going to private physicians for medical care. Only 64 percent of blacks in the sample reported going to private physicians.

People must be made aware of the fact that "once hypertensive, always hypertensive," and that even a slight rise in blood pressure is important. This procedure will not only identify many undiagnosed hypertensives, but will also reinforce the importance of blood pressure as a health factor. This does not necessarily mean that they must be on a special diet or take a special pill, but they must remain under medical follow-up. They must be made to realize that most people with high blood pressure "feel fine," that they should not wait until they "feel bad," because then much damage may have been done to the heart, kidneys, or major vessels. Once this message has been communicated, an appointment for treatment should be made within 24 to 48 hours, to emphasize the importance of their health situation.*

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*See Task Force II report in reference to the following:

The physician must be re-educated regarding the seriousness of even mild hypertension and he must be encouraged to pay more attention to treating patients rather than just diagnosing them. He should be fully aware that this is a preventive medicine program and not one of emergency medical care. A recent publication distributed through the American Heart Association indicated that an adequate office workup for a newly discovered asymptomatic patient with mild hypertension might include only determinations of blood glucose, creatinine, and potassium ($6.00). Costly x-rays, electrocardiograms, and complicated chemical determinations need not be routine. These can be obtained at a later date if indicated. The physician must motivate patients to keep taking their medication and remain under medical care. Such motivation can only result from a good doctor-(or paramedical-) patient relationship. In any case, care must be personalized and the patient must be able to identify with somebody and, most important, the need for continued medical care constantly must be emphasized. The intelligent use of paramedical personnel may be the only solution in this regard since the number of patients may be overwhelming (over 23,000,000 in the United States). Follow-up appointments must be routine, and "no shows" must be contacted. Finally, treatment must be kept simple but not necessarily rigid since changes may be indicated to prevent toxicity.

Clinics and doctors' offices must be reorganized to be patient-oriented rather than disease-oriented. They must be operated efficiently, utilizing a meaningful appointment system, supplying medication when possible, and dedicated to the giving of personalized care. All the advances in therapy are not going to be realized; heart failure, heart attacks, renal failure, premature deaths are not going to be prevented, unless the patient remains under medical care and continues to take his medication.

For the working poor, efforts within their working situations to provide blood pressure measurements, educational support, and possibly therapy should be encouraged whenever possible. The positive aspects of controlled blood pressure include insurability at standard or near-standard rates and increased employability of these persons. Manpower training and government job placement agencies should provide blood pressure measurement and educational referral services for appropriate treatment to enhance employability of hypertensive individuals.

SPECIAL CONSIDERATIONS FOR MULTIPLE-RISK GROUPS

The standard methods of communication for informational material will reach some of the people in each of these target groups. Because of the diverse nature of their medical problems, specific channels must be used to reach each group selectively. The aid of organizations such as the American Heart Association and the American Diabetes Association should be sought. These groups can be asked to include information about high blood pressure in their mail and handout materials. Many of these pamphlets are updated on a regular basis, and hypertensive information could be included easily.

To reach elderly and welfare people, short health messages could be mailed out with Social Security checks, welfare checks, or government retirement checks.

Drug companies who manufacture drugs used in hypertension, diabetes, or high blood cholesterol may help prepare information materials for physicians and pharmacists. They may also furnish pamphlets for physicians' offices to help inform patients about high blood pressure in relation to other conditions. An ideal response by drug companies to the hypertension problem would be development of a cooperative program to increase the likelihood of medication therapy compliance.

At least three major barriers to compliance have been identified: (1) cost; (2) difficulties in maintaining medication schedules; and (3) medication side effects. Combating side effects is likely a long, complex undertaking. However, costs and medication scheduling may yield to sincere cooperative efforts.

It may be effective to provide nominal discounts to hypertension patients who refill medication prescriptions prior to a stated expiration date each month or quarter. Medication scheduling may be simplified for those patients on uncomplicated or standard regimens by packaging medications in a fashion similar to oral

contraceptives. Task Force III urges drug companies to test these concepts on a pilot basis.

Media messages should be programmed for the time of day when they are able to reach the largest percentage of the people in the selected target groups.

School health teaching programs and materials should be examined to see whether adequate blood pressure information is put forth. In addition, we need to identify believable sources of information for young people (e.g., disc jockeys) and utilize these to explain the message regarding high blood pressure.

Proposed action steps for multiple-risk groups are the following:

a. Develop media releases (radio, TV, and newspaper) on an ongoing basis.

b. Contact all health-related organizations that can assist in spreading high blood pressure information along with their own messages.

c. Consider use of some readily available government agencies to spread specific short messages to selected groups that may be hard to reach through other media.

d. Review text books and curricula for health courses from elementary schools through college. Principles of student involvement in the process can be specifically carried out in relation to learning about blood pressure by studying models of the circulation system and by using the sphygmomanometer stethoscope. Screening programs in schools can have health education as a primary goal and the yield of cases as an important secondary goal. (The number of teenagers with elevated blood pressure, particularly among blacks, is not insignificant.)

Section 6

EVALUATION MECHANISMS

Insofar as possible, Task Force III has attempted to state its recommendations and objectives in measurable terms so that objective evaluation may be accomplished. In many instances evaluation can be accomplished simply by recording the fact that a certain task was undertaken, the date it was undertaken, and the responsible agency. Other activities will require a more formal approach.

A number of the recommendations and objectives are based on the National Hypertension Interview Survey. Obviously, a follow-up survey or surveys must be made to evaluate changes in these baseline data. The Task Force recommends that in 1976, a second National High Blood Pressure Interview Survey be conducted to measure the change in level of knowledge and behavior relating to high blood pressure from that estimated in the survey just completed. Because 1976 is a national centennial year, some advantage may be gained from educational programs related to special centennial activities. At the very least, a 5-year follow-up survey should be accomplished in 1978.

The Task Force has entered active planning with the National Center for Health Statistics concerning the addition of a series of questions on high blood pressure to the 1974 National Health Survey. This plan includes in part selected questions similar to some in the longer survey just completed and will provide some comparable data on a larger number of persons which will permit evaluation of differences of knowledge and behavior in more subgroups within the population. Participation rates are usually very high in National Health Surveys. In these ways we would provide short- and medium-range evaluations.

Long-range evaluations which should be done include systematic review of trends in mortality, drug prescriptions, patient visits to doctors and hospitals for high blood pressure and related conditions. Numbers of communities with various kinds of high blood pressure programs should be recorded. Data are being collected by various groups now, and it is recommended that the Resource Development and Information Center maintain these data and graph trends. Many

factors go into these trends, and beneficial results cannot be attributed solely to the National High Blood Pressure Education Program.

The Task Force continues to recommend that local demonstration programs and pilot evaluation efforts for materials and techniques be carried out so that specific efforts can be assessed. Whenever possible, the groups which develop materials should evaluate them. In addition, an independent evaluation comparing various materials or techniques using a standard format would be desirable.

In regard to the evaluation of hypertension-related community education programs, the Task Force recommends that certain general protocols be followed. Educational program planning and subsequent evaluation should be based on the use of outcome objectives stated in terms of the nature and degree of behavior change sought and anticipated resulting change in health status. Any educational program supported by the federal government should require a clear statement of these objectives and either presentation of baseline data related to these objectives or clearly described methods for obtaining baseline data.

Target audiences for educational programs should be identified in some detail including geographic region, demographic data, and cultural or ethnic information. A description of the program planning methodology should include the means by which target audience members will be provided opportunity to contribute to planning.

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Appendix A

Identified Target Groups

Appendix A

IDENTIFIED TARGET GROUPS*

Many of the labels attached to ethnic, minority, and poor communities are based on preconceived ideas learned in working with educational and health institutions. Such labels as "apathetic," "poorly motivated," "indifferent to health needs," have been widely utilized in the absence of intensive efforts to study causal relationships which include the self-study of the provider group as well as the recipient group. Until comprehensive, appropriate efforts have been made available, such terms are unjustified.

It is of vital importance to the entire national effort on hypertension and high blood pressure education for the failures and gaps of former health educational programs to be avoided. New directions should be sought to reach the National Hypertension Blood Pressure Education Program goals.

RECOGNITION OF PROBLEMS

1. Prior experiences of the poor and ethnic segments of the population with survey and health projects have frequently not resulted in increased or new services nor in changes from inadequate services.

2. Economic limitations and constraints are present. These affect and are related to transportation difficulties, inaccessible locations, and inconvenience of service hours for working people.

3. Language barriers.

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4. Inadequate communication and educational efforts on the part of the providers and controllers of health services.

POSSIBLE APPROACHES FOR EDUCATION

1. Recognition of the need for respect of each individual to be made evident.

2. Utilization of ethnic and poor population representatives on all levels of endeavor — administrative, supervisory, medical, and educational. Outreach participation only is insufficient.

3. Utilization of both traditional and nontraditional educational methods in an effort to reach diverse segments of the population.

4. Utilization of multieducational courses to provide a background from which new and unrecognized leadership may arise. This includes understanding the difference between awareness and information and educational techniques.

SUGGESTED METHODS AND MEDIA FOR EDUCATIONAL ACTION

1. Develop and insert units on hypertension-high blood pressure in the programs of:

   a. Religious institutions — churches, Sunday Schools, ministerial councils, associations of chaplains, and theological seminaries.

   b. Youth programs — recreation departments, settlement houses, girls and boys clubs, detention homes, and special education facilities for the deaf and the blind. Dramatic groups and schools, from elementary through university level. Vocational and community colleges should be included.

   c. Social, fraternal, and civic groups; business and professional groups.

   d. Human rights groups for American Indians, Mexicans, Puerto Ricans, Orientals, and blacks. (For example, Jesse Jackson's PUSH organization acts as a unified body on any subject he endorses.)

2. Develop the message through music, gospel, rock, blues, and hymns.

3. Develop informational games for schools and groups such as Charades, Twenty Questions, What's My Line, and Password. Develop crossword puzzles, games based on Rummy, Old Maid, Black Jack, and Bingo.

4. Develop a preschool unit which includes pupils, teachers' aides, and parents. This could provide a coast-to-coast network in a facility used by the poor and ethnic groups.

5. Develop a Spanish-language network of community church and union affiliates. Spanish-speaking persons on all levels should be utilized in the development and presentation of the project.

6. Utilize community exchange points (barber and beauty shops, restaurants, and bars) for educational sessions for the owners. This could lead to local, state, and national inclusion of these special interest groups.

7. Develop audiovisual materials designed for full participation of the selected group. These include photograpny, stories, video, script and short story writing, and drama and dance presentations. Such an approach has a built-in educational aspect as it is necessary to learn something about a subject before creating a presentation. The financial savings of controlling high blood pressure can be pictorialized.

RESOURCE PERSONS

Every community will provide some of the target groups suggested in the foregoing — restaurants, schools, nursery schools, churches, etc. Resource persons in education, drama, psychology, communication, and medicine who also are familiar with traditions and cultural interests can be identified. The evaluation team or group should be chosen from persons who fit the above criteria.

COMMENT

The foregoing represents only a few of the problems, approaches, and methods for possible use with ethnic identified populations. An effort has been made to give broad outline suggestions which are based on some knowledge of what and where this specific community may be involved in the national program.

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Appendix B

Medical High Risk Groups

Appendix B

MEDICAL HIGH RISK GROUPS*

Hypertensive disease is one of the most important medical problems in the United States. Its importance is increasing because of recent evidence that hypertension can be controlled.[1,2] Undetected and uncontrolled hypertension has subjected affected persons to disability and/or retirement at an early age.[3] Even more serious is the high mortality resulting from hypertensive-cardiovascular renal disease.

When hypertension is present in conjunction with any one or more of several already identified risk factors, morbidity and mortality associated with high blood pressure increase significantly.[4] Thus the end result of uncontrolled hypertension is an increase in economic loss to individuals and society and, for some, a decrease in the quality of life.[5]

Because hypertension per se occurs without symptoms, the individual is unaware of the existence of the disease until symptoms develop from damage to certain organs — usually the brain, heart, or kidneys. More than one-half the hypertensive population with a blood pressure of 160/95 or greater has cardiac enlargement on chest X-ray or EKG evidence suggesting left ventricular hypertrophy.[6] Hypertension in the great majority of these people is either undetected, untreated, or inadequately treated.

Our primary concern is with those individuals who have hypertension coexisting with other factors which place them at greater risk than persons who do not have high blood pressure. We want to pinpoint them as selected target groups and identify the correct channels for reaching them with information regarding hypertension. More importantly, we need to convey to them the concept that high blood pressure can be controlled.

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In the hypertensive population, we have identified target groups by their coexisting disease process or physiological state. Higher priority should be directed toward persons with cardiovascular[7-12] or renal disease.[13-17] We must also include those with hyperglycemia and hypercholesterolemia.[18,19] Others at high risk are smokers[4] and those who are overweight.[20,21] Some special consideration should be given to elderly people with elevation of their systolic blood pressure.[22-25] In pregnancy, the relationship of high blood pressure to toxemia is well known.[15] Young people with mildly elevated blood pressure have been ignored because we have assumed that they are in a generally good state of health.

Several facets of cardiac disease have importance with regard to hypertension. Congestive heart failure in the general population is preceded in 75 percent of cases by hypertension. Once congestive heart failure develops, there is a 5-year mortality of 50 percent.[8] Fifty-five percent of cases developing congestive heart failure and 27 percent of the cases of coronary artery disease are preceded by the pattern of left ventricular hypertrophy on EKG.[10]

Few risk factors in hypertensive cardiovascular disease are more easily detected or readily controlled than hypertension. We should not wait until symptoms appear from end organ damage before treating high blood pressure. This is particularly important since it is clear that vigorous management of moderate to severe hypertension does delay development of complications such as congestive heart failure.[1] Furthermore, hypertension may predispose affected individuals to more rapid progression of artherosclerosis.[9] We have seen this process occur in the pulmonary arteries of persons who have elevated pulmonary artery pressures.

It has long been accepted that a fairly direct relationship exists between many forms of renal disease and hypertension.[15] The Cooperative Study for Renovascular Hypertension was established to obtain better knowledge of renovascular disease in hypertension.[14] We must recognize that renal disease in hypertension includes many diverse causative factors.[13] Pre-existing renal disease in pregnancy has long been a concern to physicians;[16] most patients with any significant degree of renal disease are unable to carry a fetus to viable delivery.[17] Thus, our most important concern is the management of hypertension in the face of renal disease where proper control of blood pressure may arrest or delay the progression of renal failure.[1]

The prevention of toxemia in pregnancy is another area of concern in the control of blood pressure. The rise in blood pressure along with gain in weight, edema, and salt intake seem to be the important factors. For pregnant mothers,

we should be concerned with informing them that blood pressure can be controlled[1] and simultaneously reduce one of the factors that would increase their risk of fetal and maternal death from pregnancy.

Atherosclerosis is a major complication of diabetus mellitus. Many of the same people in addition to having hyperglycemia also have high blood cholesterol levels. More than adequate data exist to support the additive impact of hypertension to hyperglycemia. If these people also have an elevated cholesterol level, they have three risk factors present simultaneously.[18,19] Thus, the morbidity and mortality figures are considerably higher.[4]

Hypercholesterolemia may or may not be accompanied by hyperglycemia. Elevated blood cholesterol level with hypertension increases the affected individual's risk for increased morbidity or mortality.[4,18,19] We should alert the public to the relationship of early death from hypertension, especially in those families who are aware of vascular disease occurring at an early age. Many of these people may know of the problem of high cholesterol within their family, but most would be totally unaware of its importance when high blood pressure is also present.

Persons who smoke may well be aware of the effects of smoking on cardiovascular disease. As with most of the other risk factors, however, they may not be aware of the increase in risk from smoking when they have high blood pressure. Since many of these people may be unable to quit smoking, it is important to manage their hypertension and thereby remove one of the potent risk factors.

Insurance companies have been aware of the relationship of body weight to blood pressure for some time.[21] People frequently have attributed these higher blood pressure measurements to artifact from the greater arm girth. When proper cuff sizes are used, this fact is negated.[20] Thus, obesity as an isolated factor shows an increased mortality rate when present with high blood pressure.

Many physicians have found diets to be unsatisfactory in controlling obesity. It thus becomes more important to inform this group of people that one of their risk factors can rather easily be controlled. We still should continue to push for weight control, however, since those who do lose weight show some reduction in blood pressure.[28]

In recent years, systolic blood pressure seems to have been ignored. Some data, however, would now suggest that we should look at it more than just superficially. A casual systolic blood pressure can be a good predictor of coronary

artery disease.[22] Blood pressure has been noted to rise progressively until about age 65, at which time it seems to stabilize. After age 65, a blood pressure reading above 185/100 may be abnormal.[23]

Life insurance data have long suggested a linear relationship between the level of systolic blood pressure and mortality.[29] Hypertension is the most common and potent percursor of atherothrombotic brain infarctions. The key to cerebral vascular accidents is to identify and treat high blood pressure. When hypertension is present with EKG evidence of left ventricular hypertrophy, cardiomegaly, and/or congestive heart failure, we are inviting stroke if we wait for the development of symptoms. Especially in the elderly with systolic hypertension, we have been reluctant to lower the pressure for fear of decreasing cerebral perfussion.[30] More recent evidence would suggest that reduction of blood pressure, even in the face of a completed stroke, may improve cerebral flow by decreasing cerebral vascular resistance. Careful control of blood pressure may actually improve cerebral hemodynamics.[31]

Young people as a group have generally been omitted unless they, as isolated individuals, were found to be hypertensive. Since elevation of blood pressure in young people has such serious long-term consequences, we should develop information directed at them specifically. Some recent data suggest that proper observation may identify those who may be hypertensive earlier than we had thought to be the case.[26,27]

These target groups are already at risk because of a pre-existing process or physiological state. The addition of hypertension brings on another factor that increases the morbidity and/or mortality rate. This is compounded by the fact that so many people are unaware of having hypertension and that they do not know about the other risk factors. Our task is to inform them of the serious nature of hypertension when it exists with one or more of these other risk factors. Somewhat specialized problems exist within each target group which relate to their medical risk factor aside from hypertension. Since hypertension is relatively easy to detect and generally easy to manage, it may be better to convey the information about hypertension to each of these groups than it would be to get them to alter living habits. One major problem in the management of any disease process is in getting patients to adhere to medications on a daily basis and to continue follow-up care. Obviously, we need to convey to them the message of the need for long-term control of hypertension.[32]

The patterns of health behavior that are a problem in other diseases exist in the area of hypertension, but the major overall barrier is lack of understanding between patients and physicians. Some patients, after leaving the doctor's

office, do not bother to have their prescriptions filled. Others who do get their prescriptions filled often do not follow the daily medication schedule. Even worse, they frequently do not go back for follow-up exams nor do they follow through renewal of prescriptions. It is also difficult to get patients' cooperation in changing living patterns such as smoking, following low cholesterol or weight reduction diets, or even getting regular exercise. For some minority groups, minor language barriers may be a problem.

The majority of the people in the United States can afford the cost of treatment for high blood pressure. However, those at the lower end of the socioeconomic scale cannot afford the cost of drugs, laboratory studies, or doctor's fees. Some of the latter group have great difficulty getting to clinics for care, even when the clinic and medicine are free. In the cities, some elderly people are afraid, for any of several reasons, to travel to a clinic alone, especially at night. In other cases, it is difficult for people to get off work in order to keep scheduled appointments.

The standard methods of communication for informational material will reach some of the people in each of these target groups. Because of the diverse nature of their medical problems, however, we need to utilize specific channels to try to reach each group selectively.

To help develop these channels, we should enlist the aid of the organizations involved in the various risk factors, such as the American Heart Association and the American Diabetes Association. We should try to enlist their concern and aid in getting them to include information about hypertension in their mail and hand-out materials. Many of these pamphlets are updated on a regular basis, and hypertensive information could be easily included.

To reach the elderly and the welfare people, short health messages could be mailed out with Social Security checks, welfare checks, or government retirement checks.

Pharmaceutical companies who manufacture drugs used in hypertension, diabetes mellitus, or high cholesterol may assist in the preparation of informational material for physicians. They may also furnish pamphlets for doctors' offices to help inform patients about high blood pressure.

NIH should produce a simple booklet for the general public to be available on request.

Media messages should be programmed for the time of day when they are able to reach the largest percentage of the people in the selected target groups.

School health teaching programs and materials should be examined to see if adequate blood pressure information is included. Additionally, we need to identify believable sources of information for young people and utilize these to explain the message regarding hypertension.

Adaptations for media and messages should be worked out with people in the information office.

The following action steps are proposed:

1. Develop media releases on an ongoing basis.

2. Contact all health-related organizations that can assist in spreading hypertension information along with their own message.

3. Consider use of some readily available government agencies to spread specific short messages to selected groups that may be difficult to reach through other media.

4. Follow through with information gained from the regional inquiry sessions, the National Survey, and workshop sessions to investigate new avenues of promoting the hypertensive message.

5. National clearinghouse development should be completed and broadened.

6. Approach organizations that develop health materials for elementary, high school, and college courses to see if these materials can be strengthened.

7. Approach all health-related organizations about updating pamphlets available to the general public with the hypertension information.

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Appendix C

Identified Hypertensives

Appendix C

IDENTIFIED HYPERTENSIVES*

Of all the target groups associated with the high blood pressure program, identified hypertensives present what is probably the most frustrating problem. Available data suggest that only one-fourth of the identified hypertensives are under effective control. In other words, nearly 9 million people in the United States know that they have high blood pressure, but little or nothing is being done about it.

PROBLEMS IN THE TARGET GROUP

Many factors are responsible for this poor compliance:[1,2] (a) long waiting times in overcrowded areas (particularly in clinics) — not only waiting for the physician, but also standing in line at pharmacies; (b) poor follow-up procedures; (c) unnecessarily complicated treatment schedules; (d) side effects of antihypertensive agents; and (e) poor or nonexistent doctor-patient relationships.

Waiting Times

Clinics or private doctor's offices operated in the traditional fashion (at the convenience of doctors and staff rather than patients) have a dropout rate of 40 to 60 percent.[1] Indeed, Wilber[3,4] has found that the dropout rate in the offices of private physicians in the Atlanta area is higher than in the Grady Hypertension Clinic. Patients will not comply if their average waiting time is 4 hours, the average time spent with the doctor is 5 minutes, and no effort is made to create a meaningful doctor-patient relationship.

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Poor Follow-Up

The studies of Schoenberger[5] in Chicago and Wilber[4] in Atlanta have shown that 55 percent of newly discovered hypertensive patients in the offices of cardiologists and internists were not given a second appointment. The results of the Veterans Administration and Public Health Studies (i.e., controlling arterial pressure significantly reduces morbidity and mortality) have obviously not reached the practicing physician. In fact, a smaller percentage of hypertensives are being treated now than several years ago.

A common reason for patients not returning to their doctors is because they "began to feel good." Physicians have not taken the time to educate their patients that hypertension is a lifetime condition and that they will have to have their blood pressure checked and take medication for the rest of their lives.

Complicated Treatment Schedule

Several studies[6,7,8] have demonstrated that the simpler the treatment the more likely the patient is going to remain on therapy. The greatest compliance occurs with a one-pill-per-day regimen. In this regard, the good effect of a combination of thiazides plus reserpine in the Veterans Administration studies[9,10] should be emphasized. The addition of a third drug, hydralazine, resulted in only a 4 mm Hg further reduction in diastolic pressure. A recent study[2] in an inner city population where an 8-month dropout rate was only 3 percent has demonstrated that, in 70 percent of newly discovered hypertensive patients, the blood pressure was brought to normal by a combination tablet of reserpine plus chlorthalidone; i.e., a pill a day. Reducing the number of pills also reduces cost to the patient.

Side Effects

Drug-induced side effects, frequently from drugs the patient does not really need, encourage the patient to discontinue medication and stay away from the doctor. The patient is either embarrassed to discuss the side effects, or he wants to please the physician by making a good report. Some patients find it easier to reduce or omit certain drugs rather than admit they do not take them. They reason that the physician will insist on their taking the drug in any event.

An explanation of the medication and its side effects must be given. It should also be made clear at the outset of treatment that a variety of drugs are available and that, if one regimen is troublesome, another can be substituted.

Doctor-Patient Relationship

In private practice and in clinics, experience has shown that patients (particularly the asymptomatic ones) will not remain under care and on medication unless they are properly motivated. Such motivation can result only from a good doctor-patient relationship. (Recent experience with an inner city population has attested to the fact that a well-trained, understanding paramedic may be substituted for the physician in this relationship.) Once this relationship has been established, time can then be devoted to educating the patient rather than in just reassuring him.

HOW TO REACH THE TARGET GROUP

Most of us seek medical help only when we are ill or in pain. Patients and, unfortunately, physicians and clinics are more oriented toward emergency-crisis situations than prevention. The message must be understood that hypertension patients who have no symptoms should go to the doctor or to the clinic to stay well, not just when they feel sick. Physicians must start to practice and teach preventive medicine.

The problem with hypertension patients living in inner city areas is somewhat different since most of these people are not under a private doctor's care. All too frequently they use the emergency room for the treatment of any illness, which obviously creates much havoc and constant chaos. The message that hypertension is usually associated with no symptoms, that it is the major cause of stroke, heart failure, and kidney failure, that it is the most common cause of death in blacks, and that these complications can be prevented by effective treatment must get to the community at all levels. The message must also provide information on appropriate sources of treatment. This message must be told in plain, understandable language (e.g., in inner city jargon for the black population and in Spanish for the Spanish-speaking sector).

Not only hypertension patients, but every patient who goes to a physician's office, clinic, or emergency room for any reason should have his blood pressure taken. Currently many specialists (e.g., psychiatrists, ophthalmologists, surgeons of all types) do not even own a blood pressure cuff. Indeed there is no reason why dentists, optometrists, and pharmacists should not take blood pressures. Perhaps no other action by health professionals will more strongly reinforce the importance of monitoring blood pressures to patients than this constant measurement each time any health professional is visited.

Blood pressure determinations are not routine even in hospitals. Many patients (particularly those not on medical or obstetrical services) leave the hospital without ever having their blood pressure checked. In a recent survey conducted in a city hospital,[11] blood pressure determinations were made on 1,340 hospitalized patients not on the medical services. Of these, 425 were found to have hypertension (blood pressure over 140/90 mm Hg); less than 200 of the patients knew about it; and only 45 were under good medical care.

PROPOSED ACTION

The action taken to reach the target group of identified hypertensives should involve both patients and physicians. Suggested approaches are contained in the paragraphs below.

The Patient

The once identified hypertensive patient must be reidentified, re-educated, and motivated to get under treatment. Although the proposed intensive information program using standard techniques will reach many people, special efforts must be made to reach the black population. The message must be in a language they understand, and it must be disseminated by people they trust in areas where they are; e.g., by the block captains, ministers, or community leaders, in the jails, bars, churches, and in emergency rooms.

The patient must be made aware of the fact that "once hypertensive, always hypertensive," and that even a slight rise in blood pressure is important. This does not necessarily mean that he must be on a special diet or take a special pill, but he most certainly must remain under medical follow-up. The patient must be made to realize that most people with high blood pressure "feel fine," and that they should not wait until they "feel bad" before seeking medical treatment, because then it is usually too late and the damage has been done. Patients newly detected in screening programs must be given examination appointments scheduled no more than 2 days from the time they are screened. Longer delay carries an implied message that the problem is not serious and may be ignored.

The Physician

The physician must be educated regarding the seriousness of even mild hypertension, and he must be encouraged to give greater attention to treating rather than just diagnosing patients. The American Heart Association has

recently recommended that an adequate office workup for a newly discovered asymptomatic patient with mild hypertension should include only determinations of blood glucose, creatinine, and potassium. Costly x-ray, electrocardiograms, and complicated chemical determinations should not be routine.

He must motivate his patients to keep taking their medication and to remain under medical care. Such motivation can result only from a good doctor-patient relationship. Care must be personalized. The patient must be able to identify with somebody, and the need for continued medical care must constantly be emphasized. The intelligent use of paramedical personnel may be the only solution in this regard. The value of paramedical personnel, not only in clinics, but in physicians' offices, will be accepted by the physician only by repeated successful demonstrations.

Follow-up appointments must be a routine, and "no shows" must be contacted. Finally, treatment must be kept simple but not necessarily rigid since changes may be indicated to prevent toxicity.

THE SYSTEM

Clinics and doctors' offices must be reorganized to be patient-oriented rather than disease-oriented. They must be operated efficiently utilizing a meaningful appointment system, supplying medication when possible, and providing personalized care. Keeping diagnostic tests at a minimum, using the least number of antihypertensive medications, and utilizing paramedical help in the follow-up will greatly reduce financial burden and, hopefully, enhance compliance.

Advances in therapy are not going to be realized, nor are heart failure, heart attacks, renal failure, and premature deaths going to be prevented, unless the patient continues to remain under medical care and to take the prescribed medication.

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Appendix D

Community Education Development Meeting

Appendix D

COMMUNITY EDUCATION DEVELOPMENT MEETING

It is clear that centralized, federal efforts alone cannot successfully achieve the necessary degree of community education required to accomplish the intent of the National Hypertension Education Program. If this Program is to be brought to fruition, most of the planning, funding, and activities must be accomplished within local communities across the nation. Community health education, the Task Force believes, has a definite role in arousing community interest and stimulating a community-wide response to the problem of hypertension.

Although many factors must be considered in stimulating and coordinating local action, a logical and necessary first step is the identification and involvement of a variety of community leaders in such a program. Toward this end, Task Force III held, on April 10-11, 1973, in Atlanta, Georgia, a one and one-half day planning session to develop model strategies for achieving this involvement.

Approximately 30 persons representing various community segments and active or developing community hypertension programs; Task Forces I, II, and IV; and members of Task Force III were invited to meet for the purposes of: (1) informing these persons of the nature and purpose of the National Hypertension Program; (2) soliciting their general interest and help in planning the program; and (3) developing a community action model for initiating local hypertension education, screening, and follow-up programs.

Current Task Force opinion suggested that the model should meet the following criteria:

1. Any effort which is initiated should be self-sustaining for at least 10 years.

2. Insofar as possible, it should use existing system elements rather than require development of additional new elements. This condition is not meant to imply that changes may not be made in the current system.

3. The action program must be accomplished essentially from local resources and with a minimum of federal support.

4. Any action undertaken should be designed not to treat hypertension as an isolated entity, but as the first step in an overall preventive care program dealing with major health issues.

These criteria were used to limit the scope of discussion throughout the entire session. Participants were specifically cautioned against inventing a new medical care system.

PARTICIPANTS

Thirty-one persons attended all or part of the sessions. Distribution by profession included ten physicians, ten community-based health educators or information personnel, two R.N.'s, and eight other persons. In terms of organizations, eight persons represented various federal agencies including Health Services and Mental Health Administration, National Heart and Lung Institute, Food and Drug Administration, and Veterans Administration. Six active or planned community hypertension programs were represented: Ann Arbor, Michigan; Chicago, Illinois; Kansas City, Missouri; Los Angeles, California; two from Atlanta, Georgia; and Birmingham, Alabama. Private group representation included United Medical Service, Inc. (Blue Shield) of New York City; Southern Bell Telephone and Telegraph Company; the American Heart Association; the Georgia Heart Association; the Connecticut Mental Health Center in New Haven; the American Academy of Family Physicians Commission on Environmental and Public Health; and the United Way Metro Atlanta, Inc. Three important groups who were invited but were unable to attend were the Citizens for the Treatment of High Blood Pressure, Inc.; the National Heart and Lung Institute High Blood Pressure Information Office; and the John F. Small Advertising Agency in New York which is the contractor for a portion of the National High Blood Pressure Program information materials. A complete list of participants is appended as Exhibit D-1.

DISCUSSION FOCUS

Discussion at the planning session was based on the general question, "What action must be taken to achieve lasting and widespread community involvement leading to implementation and proper support of a community hypertension

program such as that suggested by the Inter-Society Commission Screening Model?"

Four secondary questions were examined:

"Who should act and how are these persons or agencies to be identified?"

"What message is most likely effective for motivating these persons?"

"What is the most effective means of delivering the message to these persons?"

"What specific strategies may be employed to actively involve these persons?"

PROGRAM FORMAT

The program was initiated with a half-day session including: (1) a description of the National Hypertension Education Program by Dr. John Stokes, NIH; (2) presentation of the current status of community hypertension education by Dr. Campbell Moses, American Heart Association; (3) a brief presentation describing the specific purposes of this meeting and the necessity to remain within this focus by Mr. Graham Ward, Western Pennsylvania Regional Medical Program; and (4) a nominal group process session to identify likely community leadership to be involved, followed by discussion on the priority of importance in reaching those identified and means by which communities can accomplish this identification.

The program of the second day opened with informal, brief presentations from community hypertension programs represented at the session with the presentation emphasis on the types of leadership involved in the various programs. The purpose of this portion of the program was to show the variety of approaches which may be used in various communities.

The remainder of the morning was devoted to small group discussion for the purpose of categorizing the various types of leadership which might be involved and to devise in some detail messages which would be appropriate for each of these types of leadership.

Following lunch, a brief reorientation session was held for all attendees to provide feedback from the first small group discussion and to supply any needed guidance or focus for the following sessions. After reorientation, small group discussions focused on identifying appropriate media or other means of delivering the message to the target leadership as well as the development of strategies other than communication methods for involving these persons. The day's activities were concluded with a brief overall summary of results of the meeting with a final opportunity for open discussion from the floor (see Exhibit D-2 for program schedule).

Because of the broad, general nature of the questions to be examined, an effort was made to divide the focus of attention among the three discussion groups. The community hypertension screening program model described in the Inter-society Commission Report indicated three major areas requiring involvement of people: (1) sponsorship; (2) public education and public relations; and (3) the delivery system. Each discussion group was assigned for their consideration one of these areas for the duration of the conference.

To further assist consideration of the question, likely tasks or areas of responsibility were suggested as functions under each category.

Sponsorship

1. Identify and involve the wide variety of persons and organizations required to plan, implement, and evaluate the program.

2. Assume major leadership responsibility for initial planning, ongoing coordination, and outcome evaluation.

3. Provide funds or actively assist in locating funds for program support.

4. Lend prestigious name or image to the program toward the objective of securing both community response and funding support.

Public Education and Public Relations

1. Assist health professionals to understand, design, and use the educational process.

2. Develop, produce, and promulgate supplementary educational materials for a variety of audiences.

3. Work with the local school system(s) to develop behavior oriented health curricula.

4. Identify and involve community leaders having influence among significant portions of the population.

5. Inform the community about special events.

6. Provide technical expertise in communications, education, and community involvement.

Delivery System

1. Lead and coordinate an ongoing continuing education effort for a variety of health professionals based on assessment of practice — not assumptions — to determine educational need.

2. Identify and activate all resources for detection, referral, and treatment within the existing system.

3. Provide manpower and equipment for special programs.

4. Provide technical expertise and consultation in detection and patient care methodology.

RESULTS

During its nominal group process, each discussion group identified approximately 50 either specific or general organizations which might exist in a given community and play a role relevant to sponsorship, public education, or delivery system. Approximately the first ten organizations on the lists generated by each discussion group are shown in Exhibit D-3.

Each discussion group was requested to develop for the organizations identified as target groups both a message to elicit the organization's involvement and a strategy for achieving that involvement. An initial review of recorder's notes shows the following: certain general guidelines seemed to be widely

appropriate for all groups concerned. As part of the message, all groups should be made aware of the current epidemiological and treatment evidence relating to hypertension. A generally agreed upon strategy is the need to involve all whose participation is desired and anticipated early in the planning process. Specific messages and strategies developed by each of the discussion groups are shown in Exhibit D-4.

SPONSORS

A variety of sponsors were identified with the role of each varying somewhat according to resources available to each group. Particular emphasis was given to the planning activities of each sponsor.

The Medical Society should be involved in planning as a communicator to private practitioners and as an authoritative body in community health endeavors. Medical Society support will be through volunteer efforts in planning, screening, and care of indigents without third party resources.

Health insurance companies should be involved in planning to develop programs of insurance for preventive services and appropriate payment for patient educational and care services by allied health personnel. They should support education and screening to emphasize the value of preventive measures.

Local health departments should be involved in planning in their role as evaluators of need, priorities, and results, and as providers of care for certain groups and of special services such as nutrition education, registries, vital statistics, and laboratory tests. Within priorities, they can provide funds or assist in identifying sources of funds for special programs.

The Heart Association should be involved in planning in its role as initiator, communicator, coordinator, a provider of educational and special services. They can frequently support coordination efforts and educational programs.

The administrative and professional staffs of community hospitals should be involved in planning to develop a broader concept than that of providing services for emergency and acute care. Linkage with outpatient and industrial health clinics and community health outreach services is essential to an integrated community approach to the health of its citizens. The hospital may provide clinic, diagnostic, and laboratory facilities and be a center for educational materials and programming.

HMO/Group Practice (prepaid) organizations should be involved in planning. They have the potential for preventive, acute care, and health maintenance programs for defined groups in the population. The ability to evaluate effectiveness of programs is particularly significant. Demonstration of systematic approaches, training and educational services, and special services to other practitioners and their patients are within the potential of these organizations. They have a full-cycle role -- planning, providing, evaluating.

State Health Departments should be involved in planning in their roles as administrators of programs, funding resources, licensing authorities, legislative contacts, and skills in planning and evaluation. They may be able to provide funds, consultants, laboratory services data, educational materials, and some health care services, particularly in rural or isolated areas.

Local industries and their unions and employee associations should be involved in planning, educational programs, monitoring, and surveillance; the larger ones can be involved in direct health care services. In the opinion of the Task Force, these organizations, particularly large industries and unions, have a great potential for expanding efforts in high blood pressure screening, education, surveillance, and even management.

Service groups in communities (e.g., Rotary, Kiwanis, and church groups) are frequently looking for community projects. They can provide reliable and believable communication channels, assist in screening and educational efforts, and provide services such as transportation for patient care.

PROVIDERS OF EDUCATION AND INFORMATION

For general public education, the following providers are felt to be of particular importance:

a. Decision makers within the media industry including owners, program directors, disc jockeys, and public service directors of local radio and television stations.

b. Elected public officials.

c. Peer group paraprofessional health workers including salaried and volunteer.

d. Members and staff of the local Heart Association.

e. Employers including officers, personnel staff, and medical department or first aid staff of industries.

f. Local union officials.

g. Learning resource centers including schools.

h. Community service organizations and churches.

i. Local advertising agencies and public transportation officials.

Patient education is the direct responsibility of all health professionals and allied health personnel involved in screening and/or treating individuals.

A significant number of persons who know or knew at one time that their blood pressure is or was elevated are not receiving appropriate care for their high blood pressure. This group of persons is one of the major target groups addressed by Task Force III.

Providers of public education can broadcast the message to reach these persons, but additional direct efforts by knowledgeable or potentially knowledgeable persons with whom they have frequent contact will have more likelihood of success in changing them from persons with uncontrolled blood pressure to persons with controlled blood pressure.

Educational programs — sponsored at work, in schools, in churches, and among families with members who have high blood pressure — for dentists, pharmacists, optometrists, disc jockeys, barbers, beauticians and bartenders may have a particular impact by reaching the asymptomatic person with high blood pressure who rarely, if ever, goes to a doctor or other medical clinic for a check-up. These same groups can help by casual daily reminders to individuals they know have high blood pressure of the benefits of staying on the medicine and keeping their medical appointments.

Educational methods for care provider use are essential tools which must be provided and updated for all health professionals and allied health workers. Certain groups such as dentists and pharmacists have already indicated strong interest in expanding their role into high blood pressure patient education and screening. Persons or groups with public education capabilities should make every effort to assist health professionals by providing them with informational materials for distribution. More important, every effort should be made to help

health professionals identify their role in patient education and to provide them any needed instruction in the practical application of the educational process.

PROVIDERS OF HEALTH CARE

A variety of providers of health care were identified as having primary importance in the delivery of education and service.

Medical societies, in their role as authoritative communicators to private physicians and whose support lends soundness and credibility in the eyes of the public, may sponsor continuing educational efforts. They can support and recommend to private physicians the use of physician assistants.

Private physicians, as principal providers of health care to patients with high blood pressure, have a potential for awareness of the special needs of patients. They also have a special support role in volunteering services for medically indigent who are ineligible for other sources of support for care and in providing lay and professional education.

Local health departments in their community health educational role can provide health care for certain groups of patients, support continuing education for health professionals and allied health groups, and support training and licensure or certification of physician assistants.

The Heart Association has a well-established role in the coordination and leadership of public continuing education as well as providing special counseling and patient education services. Its potential for home contacts during fund raising drives can be more fully utilized by training volunteers to provide a health message as well as soliciting funds.

Industry and Industrial Health Councils have great potential for periodic educational and screening efforts and, through industrial medicine departments and staff, for health care monitoring, surveillance and care.

Health Maintenance Organizations, as providers of health care, have a role similar to physicians. Because of their contractual relationships with industry, Health Maintenance Organizations have a unique potential for influencing the health education activities of employers.

Media and community organizations can enhance awareness, provide repetitive contacts with the message, and influence potential sponsors and health care providers.

SPECIAL MESSAGES

To further assist communities institute local high blood pressure control programs, the Task Force attempted to develop messages for a variety of groups with likely involvement in this activity. In some cases, the message is intended to be persuasive and solicit involvement. In others the intent is to clarify a role. The following list is not exhaustive either in terms of groups which may be recruited or of approaches to these groups. Rather, it is meant to serve as examples of points which might be made. The uniqueness of every community and its available resources clearly requires individual adaptation of these messages and, very likely, development of others.

Medical Societies (and in turn private practitioners):

"Community action to promote control of high blood pressure will enhance the preventive efforts of physicians by assisting patients in following their physicians' therapy and counsel and by promoting improved communications between the physician and his patient."

"Planning efforts for a community program of high blood pressure education will enlist the early participation of private practitioners."

"A high degree of believability and therefore success of a community health effort is dependent upon the participation and support of the Medical Society and official health agencies for public awareness programs and especially upon the critical specific support of the private practitioner and clinic staff in their authoritative counsel and dialogue with patients."

"Medical Societies can help alleviate the concern of many physicians by communicating and recommending to them the currently prepared AHA guidelines for a modest routine diagnostic work-up for most patients with high blood pressure. This action will reduce strain on the patient's budget and hasten the application of therapy to reduce the blood pressure."

"Encourage the use of trained health workers in addition to physicians and nurses by private physicians in their education program for patients."

Health Departments, State and Local:

"The support and voice of official agencies is significant in gaining public attention."

"Publicity of need, programs, and potential resources encourages the active participation of voluntary organizations, private practitioners, and the public."

"Education by example of high blood pressure education programs for government employees, including legislative bodies, may be particularly effective."

"Official agencies can provide leadership in working with rural and small communities with inadequate resources and in arranging coordination of services."

"Within current patient services programs, messages and services relating to high blood pressure can be added and integrated, with minimal difficulty and cost."

"Encourage positive messages to avoid any linkages with regulatory, fear-provoking messages associated with official agencies."

"Encourage use of volunteers in local health department activities."

"Emphasize communication with people in the educational process rather than merely the production of brochures, pamphlets, or news releases of statistics."

Heart Associations:

"Affirm the valiant and significant frontier efforts of this organization in the past relating to public education in heart and vascular diseases, including high blood pressure."

"Service efforts need greater emphasis, such as continuing educational programs."

"Heart Associations need to include wider representation from the community."

"Initiate small, comprehensive, indepth grass roots efforts as models and demonstrations which continue to be expanded through other resources."

"Continue effective role as initiators, stimulators, coordinators."

"Train canvassers to provide an educational message personally, not just a brochure."

"Include high blood pressure education efforts in other clinic and cardiovascular educational programs."

Other Community Service Organizations:

"Give facts and evidence of medical priority" (to persuade them to use this means to fulfill their need for a public service project).

"Provide training to give volunteers confidence in an educational role."

"Describe relationship with other health programs and describe plan to integrate a high blood pressure education program with other health programs in the community." (Senior citizen groups particularly may be interested because of the large number in their own group who may have elevated blood pressure.)

Employers:

"Blood pressure education and services can reduce costs due to and related to morbidity, mortality, and insurance."

"Preventive care and educational programs require the repetitive daily awareness message which can effectively be carried out in the working situations."

"Give out health messages in paycheck envelopes." Medical clinic staffs of industry may be the most immediately available group with experienced paramedical staff providing screening and health care who are able to include blood pressure. For smaller industries without clinics and medical staff, those administering the requirements of the Occupational Safety and Health Act of 1970 should stimulate cooperatively sponsored health services which should be urged to include blood pressure measurement and education and possibly monitoring and surveillance services for employees.

Pharmacists:

"Educational services to the patient with high blood pressure will enhance the relationship of patient and pharmacist and, by resulting in better compliance with therapy, will benefit both patient and pharmacist."

CONCLUSIONS AND RECOMMENDATIONS

Judging from the relative ease with which workshop participants produced an extensive list of potential resources for community hypertension programs, it would appear the Task Force contention that few new mechanisms need be developed is essentially true. It is recognized that all the resources cited do not exist in every community; however, most are found in many. Those communities having none or few of these resources face problems beyond the scope of the Task Force or workshop assignment. To these communities, we can recommend only that they begin immediate and active participation in areawide health planning to develop needed facilities and organizations.

In the course of discussion, the point was raised that many of the resources identified have not previously demonstrated either a willingness or ability to participate in a cooperative community-wide effort of the type required. It was argued that new mechanisms were necessary to overcome this deficit. In counterargument, it was pointed out that no strong, or even weak, evidence exists to support a belief that new system elements would achieve greater success. Rather, the task at hand is to move the existing system elements to fulfill their obvious and proper roles.

The Task Force is strongly inclined to support the latter view. The fact that this task is difficult does not negate its necessity. New relationships and attitudes, the Task Force feels, are valid goals. Further duplication of functions and facilities is not. The intent of the Task Force is not to discourage the testing of new ideas, but to urge innovators to evaluate fully their efforts against objective standards and to avoid reinventing the same old wheel.

A stratagem often repeated by workshop participants and heartily endorsed by the Task Force is the early involvement in planning of all groups having potential to contribute to the effort. Although effective coordination usually requires vesting of responsibility to a single person or group, successful community planning and involvement must be multilateral from its inception. The group or organization accepting initial leadership must be both rapid and thorough in identifying all contributing resources and bringing them early into the planning process.

As a corollary to this broad involvement in planning, it was recognized that coordination of an operational program requires a single focus. An early step in planning must be the identification of an organization to serve this function on a continuing, long-term basis. No specific group was recommended at the workshop inasmuch as each community must make its own determination according to local circumstances. However, Task Force III suggests certain general attributes as desirable: (1) a stable organizational future; (2) community credibility among both lay and professional groups; (3) if possible, a pre-existing wide range of contacts and working relationships among health care groups and institutions; and (4) a genuine commitment to engage in a long-term effort.

A secondary, and hoped for, result of the workshop was the opportunity for the exchange of information among the community hypertension programs invited to attend. The scheduling of the workshop was set up to provide a third of the time for orientation of participants to the purposes of the National High Blood Pressure Program, a third for mutual discussion of selected National High Blood Pressure Program problems, and the final third for both formal and informal information exchange. The group responded spontaneously in support of this latter opportunity at the final plenary session. When asked the open question, "What was the greatest benefit you personally received from this session?" the exchange opportunity was cited by many. When later asked how the National High Blood Pressure Program could best assist their efforts, a repeat of the workshop was favored second only to the provision of funds.

Although evaluation of the effect of such workshops is difficult, Task Force III feels strongly that the enthusiastic reception of this initial gathering is indicative of a need not otherwise being met and recommends annual, or preferably semiannual, meetings of a similar nature be organized and supported on a continuing basis by the National High Blood Pressure Program.

Exhibit D-1

Attendees — Task Force III Community Education Workshop
April 10-11, 1973

Ms. Shirley Barth
Health Services and Mental Health Administration
Information Office
Rockville, Maryland

Mr. Caesar Branchini
United Medical Services, Inc.
New York, New York

Dr. Lauren M. Brown
Commission on Environmental and Public Health
American Academy of Family Physicians
Kansas City

Dr. Robert Cunningham
Southern Bell T. & T. Company
Atlanta, Georgia

Dr. Michael Decker, Ph.D.
Department of Community Health Services
School of Public Health
University of Michigan
Ann Arbor, Michigan

Ms. Jessie Deloch
Control Systems Research, Inc.
Chicago, Illinois

Mr. Charles H. Dick
Food and Drug Administration
Rockville, Maryland

Dr. Arthur Gear, Jr.
Veterans Administration Hospital
Richmond, Virginia

Dr. Ernest Harburg
Department of Psychology
University of Michigan
Ann Arbor, Michigan

Ms. Thomasina Holmes
Charles R. Drew Postgraduate Medical School
Los Angeles, California

Mrs. Claire J. Hurst
Pittsford, New York
Rochester

Mr. Ronnie Jenkins
Grady Hospital
Atlanta, Georgia

Mr. Barry Karlin
Health Services and Mental Health Administration
Office of Administration
Rockville, Maryland

Dr. Deanne Knapp
Bureau of Drugs
Food and Drug Administration
Rockville, Maryland

Dr. Jesse Kraus
University of California
Department of Community Health
Davis, California

Exhibit D-1 (Continued)

Ms. Jane McCombs
Grady Hospital
Atlanta, Georgia

Dr. Campbell Moses
American Heart Association
New York, New York

Mr. Kermit B. Nash
Connecticut Mental Health Center
New Haven, Connecticut

Mr. James Nunnally
Wayne Miner Health Center
Kansas City

Mr. William R. T. Oakes, Jr.
Control Systems Research, Inc.
Arlington, Virginia

Mrs. Sandra Owen
Emory University
Grady Hospital
Atlanta, Georgia

Dr. Gerald H. Payne
National Heart and Lung Institute
Bethesda, Maryland

Mr. Wilbur Pinder
Health Services and Mental Health Administration
Rockville, Maryland

Dr. Edgar Proctor
Georgia Heart Association
Atlanta, Georgia

Mr. J. T. Ray
Group Vice President
Trust Company of Georgia Bank
Atlanta, Georgia

Dr. James Schoenberger
Department of Preventive Medicine
Rush-Presbyterian-St. Lukes Medical Center
Chicago, Illinois

Mr. Charles R. Sheldon
Department of Pediatrics
University of Alabama
Birmingham, Alabama

Mr. Charles Smith
United Way of Metro Atlanta, Inc.
Atlanta, Georgia

Dr. John B. Stokes III
National Heart and Lung Institute
Bethesda, Maryland

Mr. Graham W. Ward
Western Pennsylvania Regional Medical Program
Pittsburgh, Pennsylvania

Dr. Joseph Wilber
Georgia Department of Public Health
Atlanta, Georgia

Mr. Gerald Wilson
Control Systems Research, Inc.
Arlington, Virginia

Ms. Jobyna Wilson
Charles R. Drew Postgraduate Medical School
Los Angeles, California

Exhibit D-2

Task Force III Community Education Workshop

PROGRAM SCHEDULE

TUESDAY, APRIL 10

12:00 a.m. — Registration

1:00 p.m. — Welcome — Dr. Gerald Payne, NHLI, Chairman, Task Force III

1:10 p.m. — Description of the National High Blood Pressure Education Program — Dr. John Stokes, NHLI, Coordinator

1:30 p.m. — Where We Are in High Blood Pressure and Community Education — Dr. Campbell Moses, Medical Director, American Heart Association

2:00 p.m. — Discussion of Meeting Purpose and Format — Mr. Graham Ward, Assistant Director, Western Pennsylvania Regional Medical Program

2:30 p.m. — Coffee Break

3:00 p.m. — Identification of Needed Leadership (Nominal Group Process) Ward, Group leaders

4:00 p.m. — Discussion of Group Results

5:45 p.m. — Cash Bar

7:00 p.m. — Dinner — Speaker: Dr. Joseph Wilber — Coordinated High Blood Pressure Efforts in the Southeast

8:30 p.m. — Informal Discussion/Information Exchange

WEDNESDAY, APRIL 11

9:00 a.m. — Summary and Questions

Exhibit D-2 (Continued)

9:15 a.m.	—	Report of Existing Community Programs with Panel Reaction
10:45 a.m.	—	Coffee Break
11:00 a.m.	—	Message Development (Small Group Session)
12:30 p.m.	—	Lunch
1:15 p.m.	—	Summary and Questions
2:00 p.m.	—	Media and Strategy Identification (Small Group Session) (Coffee served — no break)
4:00 p.m.	—	Final Review and Open Discussion

Exhibit D-3 GROUPS IDENTIFIED*

Sponsorship	Public Education	Delivery System
Medical societies	Local radio and TV stations, top management and public service directors, and local newspapers	Local Health Department
Insurance companies	Peer group paraprofessionals	Local news media
Local health departments	Local Heart Association	Medical Society
Heart Association	Community service organizations	Heart Association
Community hospitals	Employers	Private physicians
Health maintenance organizations	Local medical society	Occupational health areas
State Health Departments	United Way agencies	Churches
Local major industry	Local advertising executives	Community movers
Local community organizations such as: service clubs, Urban League, United Way, Chamber of Commerce, PTA's, Y's, Grange	Corporations large enough to have public relations departments; e.g., public utilities	CHP (314) "A" and "B" Agencies
Union locals	Learning resource centers	Clinical directors for audiovisual input
		Health profession schools

* This list is not exhaustive; participants in the Task Force III Community Education Workshop identified some 50 other resources. The above were noted to have greatest potential, experience, manpower, and other resources available to accomplish the purposes of a community-based high blood pressure program.

Exhibit D-4

MESSAGES AND STRATEGIES

Sponsor	Message	Strategy
1. Medical Society	In best interest of local doctors to control hypertension in community. Doctors will be able to care for patients, not lose patients. Local M.D.s will be brought into care strategy early — not after recruitment of patients. Blood pressure only one part of patient — whole patient needs consideration Program can help in detection and maintenance stages; relieve overload. (Keep up communication with M.D.)	Avoid accusing medical society of negligence. Ask for limited support. Avoid opposition at all costs. Emphasis on ongoing program/MD relationship. Make program's plans and intentions perfectly clear to private M.D.'s society.
2. Health Insurance Companies	See hypertension prevention as a cost benefit. For public: "Our insurance company is concerned to keep you well..."	Persuasion. Local pressures. See health education as good public relations. Seek education money, not screening.

Exhibit D-4 (Continued)

Sponsor	Message	Strategy
3. Health Departments (local)	Show new resources.	Explain plans and limitations. Use influence of state health department to generate local health department leadership. Important to institutionalize local hypertension control services for continuity of care.
4. Heart Association	Emphasis on services for local community. Change proportions going to be applied vs. research and administration. Attempt small local models — not initial massive thrust. Strong emphasis on indepth planning; understanding grass roots organization and long-term care needs.	Image of service rather than fund-raising (don't have to provide service by self — can provide leadership).
5. Community Hospitals	Hospital's goal is to support improved community health, not acute care. Community hospital offers logical base for leadership and service. Offers comprehensive service and continuity.	Nonprofit hospitals may need separate approach compared to proprietary hospitals. Make limited demands — perhaps space. Personnel more difficult.

Exhibit D-4 (Continued)

Sponsor	Message	Strategy
6. HMO/Group Practice (prepaid)	Make sure services cover outpatient chronic care. Cardiovascular disease — #1, can be prevented, cost-effectiveness in terms of high costs of strokes and heart attacks. Need cost-effectiveness and cost-benefits studies.	Investigate potential.
7. State Health Department		Political pressure. Emphasize prestige of state and leadership role.
8. Local Industry and Unions and Employee Associations	Hypertension control will be required in 1970 Act. To unions, demand coverage of hypertension in health insurance policies. Need national industry policy to prevent firing of hypertensives — but there are many complications. Need clear models written up for variety of groups showing that it can be done.	Enforcement of 1970 Occupational Safety and Health Act — U.S. Need to weigh confidentiality which negates industrial maintenance vs. loss of trust.

Exhibit D-4 (Continued)

Sponsor	Message	Strategy
9. Service Groups	Service group can initiate high blood pressure control program even though they don't stay with it for years. Some long-term qualified staff essential. Hypertension — major unmet need, particularly where there is no AHA chapter.	Make high blood pressure control glamorous.

Exhibit D-4 (Continued)

Public Education	Message	Strategy
1. Media (radio and ETV) Those who are decision makers — owner — programming director — recognized DJ — public service director Local papers — editorial editors — publisher — advertising (large)	Required to set aside time as public service time (often get at poor times). Take a team to take blood pressure of press, TV, radio, staff — get them involved. Use statistics, and facts and overall medical priority for weekly, local, and specialty papers; prepare copy, preferably camera ready; have facts — they do writing. Show overall program plan. It is important in the community you serve. Individual who delivers message to media (be selected).	Establish medical priority of hypertension. Market tells you which are to influence. Take blood pressure; have materials available. Emphasize back-up in community as a result of public education. A portion of advertising plan. Use large advertisers to influence media.
2. Elected Public Officials		Take blood pressure and announce.
3. Peer Group Paraprofessional Total Health Care (already trained)	You're in there anyway, why not talk about high blood pressure. Show facts on medical priority.	Reach "inaccessible" group at same time. Develop additional skills to improve upward mobility.

Exhibit D-4 (Continued)

Public Education	Message	Strategy
Categorical program staff Paid Volunteer — aged, retired, time available — at home with local community	"You're the person who makes it go." You will have to grow the potential. Define problem — are very interested and jump at it — same message as to target population in your community.	Must give positive feedback as to results of efforts. Treat as if member of staff.
4. Local Heart Association	You are the leaders. You must be representative of community. This is an overall community effort; you have knowledge and experience in this. Suggest to Heart Association that they participate in community programs and do more. Give them feedback on where they are lacking — how community reacts to Heart Association.	Join us; if you don't, we'll do it ourselves. Have large contributors influence Heart Association. Move to achieve wide community base and participation.
5. Community Service Organizations Volunteer Acceptance by Board	You are leader. Will last for many years Part of an overall program — you must have role. Establish medical priority.	Looking for ideas and projects in public service. Volunteer effectiveness is function of supervisory organization.

Exhibit D-4 (Continued)

Public Education	Message	Strategy
United Way, Allocation Division	Service Purchase Concept — show cost of service delivered.	Will help you with costs of materials and development of materials, at least give you referrals. Ride on other programs — Planned Parenthood, Diabetes, Blood Bank, Blood Drive. Makes you more responsive to overall health needs of community.
6. Employers	You are responsible corporate entity.	Often medical staff underutilized; looking for things to do.
Presidents	It pays off in reduced sickness, insurance payments, absenteeisms.	House organ — dying for material.
Industrial Personnel Relations	At least employment physicals and emergency screening.	Medical director demonstrates his usefulness.
Industrial Nurses on Medical Departments	Give out brochures in pay checks.	
Unionized vs. nonunionized; view fringe benefits as bargaining tool.	Part of an overall plan — you must have role.	
7. Local Advertising Agencies and Public Relations Agency (National Ad Council)	Chance to display imagination and good ideas and receive credit during slow period.	Public service. Go to large advertisers (public relations).
8. Public Transportation	Public service time.	Use of public transportation roof and slide space.

Exhibit D-4 (Continued)

Public Education	Message	Strategy
9. Learning Resource Centers (Medical Schools)	Justify your existence.	

Exhibit D-4 (Continued)

Delivery System	Message	Strategy
1. Local News Media		
Radio (local DJ personalities)	Message most effective for low income radio; see radio station managers for a start.	
TV	See disc jockeys — have national meet — go to them — letters to station managers.	
Newspapers		
Magazines	Get to national leaders of Motown, Capitol, Columbia, etc.	
Editors of ethnic publications		
Comic strip	Get DJ to visit your high blood pressure clinic.	
2. Industry		Employers of men (21-45).
		Company have volunteer groups come in and screen.
3. Occupational Health	Occupational Safety and Health Act.	Go to medical director to reach public relations people.
	American Association of Industrial Nurses.	There is a national medical directors' organization.
4. Local Health Department	Message must not be negative — only positive notes:	Request services of — will respond to request — will not initiate on their own.
	"Give yourself the gift of life."	

Exhibit D-4 (Continued)

Delivery System	Message	Strategy
	"Its easy to control blood pressure." This is a way for you (Health Department) to utilize volunteers — get involved. Communicate with more people.	Call meeting of Health Department and concerned groups — allow them to become sensitive. Be willing to let the Health Department have all credit -- even if you do all work.
5. Urban League		
6. Medical Society (Private and M.D.'s)	Play on their ego. Support the M.D. — encourage to do the basic workups — simple with support that will encourage M.D. to abandon their attention to the complex workup. Convince M.D. of magnitude of problem.	
7. Private M.D.'s	Enlist help of physician's assistant.	Drug companies. CIBA — advice to G.P.'s on hypertension.
8. American Heart Association	Volunteer contacts could be enhanced by training them in heart information — now they just ask for money.	Join the Heart Association.

Appendix E

Insurance Study Findings

Appendix E

INSURANCE STUDY FINDINGS

THE UNDERWRITING SIGNIFICANCE OF HYPERTENSION FOR THE LIFE INSURANCE INDUSTRY

PART I. STUDY RESULTS

All the life insurance firms contacted through this study require that an applicant with elevated blood pressure pay an extra charge for his life insurance; this extra charge is necessary to offset the increase in mortality associated with his condition. The size of the extra charge, or rating, depends upon the severity of the applicant's condition, his family history, the presence or absence of related conditions, and similar factors. All the responding firms will reduce the insured's rating if he presents satisfactory evidence of an improvement in his condition. However, the size of this reduction and the conditions of treatment under which it may be granted vary within the industry.

A new Society of Actuaries study is currently underway which, in addition to updating existing hypertension mortality statistics, will attempt to provide industry-wide statistics on the effect of treatment on the mortality associated with hypertension. Results of this study are expected to be available in 1976.

INFORMATION GATHERING PROCEDURE

To gain an industry-wide view of the policies of life insurance firms toward hypertensive applicants, the Medical Directors of 54 life insurance companies throughout the country were contacted, and information was requested regarding their procedures on handling hypertensive applicants. Of those firms contacted,

43 responded. These responses were fairly representative of the industry itself, with both small and large companies included. The presence of reinsuring firms among the respondents is particularly significant, as these firms in many cases suggest guidelines for smaller firms who do not develop any actuarial experience themselves. Major reinsurers who responded to the request for information were the Connecticut General Life Insurance Company and the Lincoln National Life Insurance Company.

A working draft of this paper was distributed to all contributing Medical Directors for review and comment. The corrections and suggested improvements which they generously provided have been incorporated into this version as accurately as possible. Because major life insurers are constantly reviewing and re-evaluating their rating materials and procedures, however, some of the information included here may already be out-dated.

UNDERWRITING IMPORTANCE OF MILD ELEVATIONS IN BLOOD PRESSURE

In general, the major life insurance firms are more conservative than most of the medical profession in assessing the significance of mild elevations in blood pressure. This conservatism is in part dictated by the requirements of the industry, which must perform careful risk analyses to guarantee that premium and other forms of income will be adequate to meet anticipated claims. Experience with literally millions of policy holders has enabled industry analysts to determine the statistical implications of even small differences in blood pressure. These figures, in turn, are used to determine the premium which an individual must pay to obtain insurance.

Industry experience has shown that excess mortality is first noted among individuals having blood pressure readings well below the 140/90 mm Hg cutoff frequently used as the upper limit of normotension by physicians. (See Table 1.) However, most insurers attempt to define a range of standard insurance (no extra premium) which will include a sizable majority of all applicants under 50 years of age. As a result, firms usually do not assess extra premiums against persons having an anticipated mortality rate only 5 or 10 percent above that which would ordinarily be expected. In general, payment of an extra premium is not required until a person's chances of dying prematurely reach 120 to 140 percent of those of his peers.

Table 1 shows blood pressure readings at which increases in mortality are first noted for given ages, accompanied by readings at which an extra premium

Table 1. Blood Pressure Readings Associated with Increases in Mortality and in Premiums, Selected Firms

Age at Time of Application	Males		Females	
	Increased Mortality Begins	Increased Premium May Begin	Increased Mortality Begins	Increased Premium May Begin
Lincoln National Life Insurance Co.[2]				
15 - 29	125/85 or[1] 135/80	130/93 or 150/80	125/88 or 140/80	130/94 or 153/80
30 - 39	125/85 or 135/80	125/93 or 146/80	125/88 or 140/80	125/93 or 152/80
40 - 49	125/90 or 135/90	130/93 or 144/80	125/90 or 140/80	130/95 or 150/80
50 - 59	125/90 or 138/80	130/96 or 146/80	125/92 or 146/80	130/97 or 154/80
60 and up	125/94 or 142/80	130/98 or 150/80	125/94 or 148/80	130/98 or 158/80
Equitable of Iowa[3]				
45 and below	134/88 or 139/82	134/92 or 146/82	136/88 or 141/82	136/93 or 146/82
46 - 55	136/89 or 141/82	136/93 or 148/82	138/89 or 143/82	138/94 or 148/82
56 and up	138/90 or 143/82	138/94 or 150/82	140/90 or 145/82	140/95 or 150/82

1 These figures have been extracted from sizable matrices having diastolic pressures on the vertical axis and systolic pressures on the horizontal axis. The upper value represents, reading the matrix vertically, the first diastolic value associated with increased costs; the lower value represents, reading the matrix horizontally, the first systolic pressure associated with increased costs.

2 First premium blood pressure values given for Lincoln Life reflect the following mortality rates: Ages 15-29 — 140 percent; 30-39 — 130 percent; 40 and older — 125 percent.

3 First premium blood pressure values given for Equitable of Iowa are based on a mortality rate of 125 percent. In practice this percentage will vary with the age and physical condition of the applicant.

may be assessed. The readings associated with extra premiums are only approximate, however, and should not be considered as definitive guidelines for the handling of each individual case. In practice, each applicant's total physical condition will be carefully evaluated; this evaluation will affect the point at which an extra charge will be made.

Many blood pressure levels which are indicative of increased mortality to the insurance industry are not considered serious by most physicians. The potential effect of this difference of opinion on the patient is not lost on industry representatives. All the responding Medical Directors who expressed opinions on this subject felt that many physicians attach too little significance to slightly elevated blood pressure readings. However, many felt that a change for the better was occurring in this area as a result of studies establishing the dramatic role of prompt drug treatment in reducing fatalities and morbid incidents among borderline hypertensives.

DEFINITION OF UNINSURABLE APPLICANTS

Major insurers will decline to issue life insurance to individuals in very high mortality classifications. The extent of risk each insurer is willing to assume varies. Some firms will insure individuals whose mortality is 300 to 500 percent of normal, for example, while others are willing to risk insuring those falling into mortality categories up to 1000 percent and higher. The definition of an uninsurable risk thus depends first upon the insurer making it. In addition, an applicant's total physical condition will figure prominently in any decision concerning his insurability. The presence of conditions indicating potentially poor survival, such as renal or cardiovascular damage, will cause an individual to be declined insurance at a low blood pressure level. On the other hand, presenting evidence of general good health can enable an individual with high blood pressure to obtain insurance more easily or at lower cost.

The blood pressure readings given in Table 2 are those at which the indicated companies would carefully scrutinize, and probably decline, an application for life insurance.

INSURING HYPERTENSIVES

All the responding insurers "rate" hypertensives; that is, they charge them a premium higher than is standard for an applicant's age and sex. Rating categories are based on the degree of excess mortality, and thus excess risk,

Table 2. Blood Pressure Readings Indicating Probable Uninsurability

The Lincoln National Life Insurance Co.

All ages and sexes:	over 200 systolic or over 112 diastolic

The Northwestern Mutual Life Insurance Co.

	over 210 systolic or over 110 diastolic

	Ages:		
Equitable of Iowa	Under 45	46 - 55	56 & over
Both sexes:	189/82 or* 160/107	192/82 or 163/108	195/82 or 166/109

* Again, these figures have been extracted from large matrices. The upper value represents the first systolic reading at which an individual might be considered uninsurable; the lower value, the first such diastolic reading.

associated with certain conditions. After an individual has been assigned a rating, that rating is used to determine the premium appropriate for the type of insurance he has purchased.

The rating category to which an individual will be assigned varies with the severity of his condition, the presence or absence of complicating conditions such as renal or cardiovascular damage, his family history, and the treatment he has received. The responding insurers feel that early treatment for hypertension is extremely desirable and does in fact reduce mortality. However, many expressed doubts concerning the possibility of convincing physicians of the value of prompt treatment. As noted above, insurers feel that the average physician's definition of hypertension is too strict and excludes elevations which are in fact medically significant. In addition, one Medical Director* pointed to what he called "an innate conservatism (on the part of the medical profession) with regard to the side effects and difficulties of long-continued drug therapy" which leads physicians to delay drug therapy until more severe blood pressure elevations have been reached.

Further, the insurers recognize the difficulties inherent in convincing patients of the desirability of a possibly unpleasant therapy. As one respondent** expressed it, "The physician has to be a good salesman to take a patient who feels well, give him pills that make him feel bad, and convince him that he really is better." Because they doubt that the average hypertensive patient will stick to a drug regimen in the absence of overt, dramatic symptoms, most insurers will not accept a treatment-lowered blood pressure as valid for rating purposes until the patient's ability to continue treatment has been thoroughly demonstrated. None of the firms contacted indicated that they would refuse to consider lowering a patient's rating after he had presented evidence of successful treatment; however, several indicated that they would never consider the individual under treatment to be a standard risk for rating purposes.

Procedures vary from insurer to insurer with regard to discounts given the hypertensive who is being treated. (A grid outlining the policies of the insurers who participated in this study is contained in Part II.) However, a few general statements can be made.

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* Richard B. Singer, M.D., Medical Director, New England Life Insurance Company.

** Memo from D. R. McCormick to Robert S. Long, M.D., Associate Medical Director, United Benefit Life.

Demonstration of Intent

All firms require that the hypertensive under treatment demonstrate his ability to continue with a treatment regimen. Rating reductions usually come in steps, with a partial reduction given for a person under treatment for 6 months to 2 years, a larger reduction given to those who have been treated for more than 2 years, and so on. At least one major reinsurer, Lincoln National Life, is willing to accept the treated blood pressure as valid for rating purposes if the insured has been under treatment for more than 5 years and if his blood pressure has been successfully lowered (below 150/96 or 160/94). The examples given in Part III illustrate the importance placed on the patient's ability to continue with a treatment regimen.

Nature of Treatment

A number of firms vary the consideration they will give to the hypertensive applicant according to the treatment he is receiving. The more potent the drugs being used, the more serious the condition is assumed to be and thus the more carefully the applicant is screened and possibly the more he will be charged.

Re-Ratings

None of the firms indicated that they would refuse to consider lowering an individual's rating if his blood pressure responds favorably to treatment, assuming that no intervening problems arise which may preclude this action. At least one firm (New England Mutual Life Insurance Company) provides its hypertensive clients with an informative handout which both explains the reasons for the increased premium and specifically states that it can be reduced if the client presents "a record of several normal readings over a period of years" based on periodic physician checkups. However, none of the firms implied that they themselves would initiate the re-rating procedure; in practice it is usually the agent who begins the review process. The amount of client information in this area may be assumed to vary greatly. It would be in the interest of the individual in a treatment program to request re-rating at an annual or, more commonly, biennial intervals, even if his blood pressure remained constant, as many firms base reductions in rating on the length of time the individual has been under treatment.

POTENTIAL SAVINGS TO THE INDIVIDUAL

Monetary savings which an individual can experience after beginning and continuing with a treatment program for hypertension vary with the cost and type of life insurance he purchases, as well as with his age and the severity of his condition. Savings are understandably greatest, both in relative and absolute terms, where the initial rating was highest. However, in terms of treatment motivation, savings are most significant for the borderline hypertensive, who may experience no physical distress, to encourage him to seek and continue treatment. The monetary savings realized through successful treatment may act as a stimulus. A table showing the increased costs associated with low-level hypertension for Whole Life and 5-Year Renewable Term Life Insurance, based on the rates of one insurer, is attached as Part IV of this study. These rates are reasonably representative of those within the industry as a whole for participating policies.

SIGNIFICANCE OF HYPERTENSION FOR OTHER FORMS OF INSURANCE

Understandably, life insurance underwriting is not the only sort of underwriting which must consider the implications of hypertension. Hypertension must also be considered in the medical evaluation of health insurance applicants. In some cases, the insurer will charge all applicants the same basic premium. The extra risk posed by the hypertensive applicant will be reduced by attaching a "rider" to his policy, which states that the insurer will not accept charges for any hospitalization or other care attributable to the insured's pre-existing hypertension. Today, however, there is a trend in the health insurance industry to follow the life insurance practice of rating the high risk individual, particularly when the degree of hypertension involved is mild. When this procedure is used, the hypertensive applicant may obtain full coverage, but at increased premium cost.

Definition of Significant Hypertension

Procedures used in determining when a rider or rating for hypertension and related ailments should be attached to an individual's policy vary among the firms contacted. One major insurer makes this determination based on the applicant's blood pressure readings. In the case of another firm, this decision is made by the patient's personal physician. If the physician maintains that his patient is not hypertensive, no rider will be applied to the policy, regardless of the applicant's blood pressure readings.

Definition of Uninsurable Hypertension

When his blood pressure exceeds a certain level, an individual is likely to be considered an unacceptable risk for health insurance purposes and his policy application is apt to be declined. Mutual of Omaha, a firm which supplied specific information in this area, indicated that they will not issue insurance to persons with uncontrolled hypertension under any circumstances. Rated insurance will be issued only to controlled hypertensive applicants with pretreatment blood pressure readings averaging less than 160 to 180 mm Hg systolic and less than 95 to 120 mm Hg diastolic. The applicant's blood pressure must have been lowered in response to treatment; in addition, he must present evidence that the lower reading is a stable one.

Determination of Nonpayable Episodes of Illness

When a health insurance policy has been modified by a rider, episodes of illness or hospitalization attributable to a stated cause are excluded from coverage; expenses incident to their treatment will not be met by the insurer. Due to the complex nature of hypertension, no hard and fast set of rules exists for determining precisely which episodes of illness will be excluded from coverage. The reason behind this absence of rules was expressed by a Blue Cross - Blue Shield representative, who noted that the degree of involvement of hypertension in any particular morbid episode is a question which can only be answered medically, by a physician having detailed knowledge of the patient's condition. As a result, health insurance claims are usually handled on a case-by-case basis, with determinations being made based on the unique circumstances of each individual.

PLANNED WORK IN HYPERTENSION

The rates of major insurers and reinsurers are in large part based on mortality figures derived by the 1959 Build and Blood Pressure Study of the Society of Actuaries, modified by each company's own calculations. This study was based on the experience of 26 insurers and included the histories of nearly 4 million individuals insured between 1935 and 1953. However, this study did not measure the effects of antihypertensive treatment on subsequent mortality, as effective drug treatment procedures were not available during that time span. To fill this gap and to discover possible changes in mortality during the past 20 years, the life insurance industry is planning a new investigation to study more recent experience on hypertension. This study will be the joint responsibility of the Association of Life Insurance Medical Directors of America and the Society of Actuaries.

For the new study, policies issued between 1950 and 1971 will be traced to policy anniversaries falling between 1954 and 1972 to determine the status of each policy holder. In addition to the subdivisions made in the 1959 study, it is planned to add several new subdivisions if the data permit. These subdivisions include the effects of drug treatment on hypertension and the relationship, if any, of high blood pressure to different diagnostic tests such as electrocardiograms, blood sugar tests, and cholesterol readings.

At the present time, the study is only in its initial phases. Data collection procedures have been devised, and invitations to participate in this project are being mailed to various insurance firms throughout the country. The amount of data which will be available is not yet known. Fortunately, many of the firms active in the 1959 study have continued to code their records following the data system used for that study; as a result, these firms have much of the required information readily available. Other firms have volunteered to review their files for the needed data. However, some of the new information requested by the present study may be difficult to obtain, especially from the larger firms. These firms may be reluctant to search hundreds of thousands of files for the few additional bits of information required for the present work. As a result of this uncertainty, it is difficult to predict how many of the analyses currently planned will be possible.

The study under preparation has tentatively been labeled "The 1976 Study," indicating its anticipated completion date. However, it was pointed out that the 1959 study, in turn, was at one point in its development known as the 1955 study. As might be expected, the individuals working on the new Build and Blood Pressure Study are not yet prepared to offer a firm estimate for the actual completion date of the study.

PART II. PROCEDURES USED BY MAJOR LIFE INSURERS FOR EVALUATING THE HYPERTENSIVE INDIVIDUAL

Although the rules used by major life insurers to evaluate the hypertensive applicant have many elements in common, procedures still vary considerably from firm to firm. As mentioned in Part I, all insurers will "rate" an individual with elevated blood pressure, with the severity of this rating dependent upon the degree of hypertension and related information concerning the individual's condition. The primary source of variation among firms lies in the degree to which each firm will reduce that rating if the individual is under treatment. In the absence of industry-wide hard data concerning the long-range effects of antihypertensive treatment on the mortality attributable to hypertension, each firm tends to make a decision on the implications of treatment based on its own experience.

The following list describes the basic considerations used by each of the cited firms in assigning a hypertensive under treatment to a rating category, either at the time he initially applies for a policy or during subsequent re-ratings. It should be noted that re-ratings can operate only to the insured individual's benefit. If his blood pressure is demonstrably lower and he has developed no new impairment when he applies for a new rating, his previous rating and thus his premium cost will usually be lowered; if his blood pressure is higher, however, his rating remains the same. Thus it is always to the hypertensive's advantage to request a re-rating at whatever interval is specified by his insurer.

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
Acacia Mutual Life	Rating reduction based on nature of treatment.	Usually 2 years; occasionally only 1.
Aetna Life and Casualty	Rating reduction possible.	1 year.

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
American National Life Insurance Co.	Rating reductions based on duration and results of treatment.	
The Banker's Life	Partial rating reductions from the inception of treatment, increasing at intervals of 2, 3, and 4 years. Standard rating possible after 5 years, if applicant has near normal blood pressure (150/96 or lower).	Usually 2 years, occasionally less.
Bankers Life and Casualty Company	Rating of hypertensive based on industry statistics; reduction possible.	After 2 years.
Connecticut General Life Insurance Co.	Rating reduction based on response to treatment, ranging from removal of extra premium to minor reduction.	
Connecticut Mutual Life Insurance Co.	Rating reduction based on duration of treatment.	
The Equitable Life Insurance Co.	A rating reduction of up to 50% if current reading is 139/88 or less.	
Equitable of Iowa	Partial rating reductions based on type, success. and duration of treatment.	1 year
Fidelity Mutual Life	Partial rating reduction from the inception of treatment, increasing at intervals of 2, 3, and 4 years. Standard rating possible after 5 years if applicant has near normal blood pressure (150/96 or lower).	Usually 2 years, occasionally less.

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
General American Life Insurance Co.	Rating reduction possible. Client will pay minimum extra rating as long as he must continue on treatment; if he remains normotensive for 1 year without treatment, rating is removed.	Usually 2 years.
Great Southern Life Insurance Co.	Partial rating reduction based on type and duration of treatment. Standard rating possible after "a number of years."	
Guardian Life Insurance Co. of America	Rating reduction for hypertensives under control.	
Home Life Insurance Co.	Rating reduction possible.	2 years.
Jefferson Standard	Rating can be lowered or removed with presentation of "new evidence."	After 2 years.
John Hancock Mutual Life Insurance Co.	Rating reduction of 20 to 50% depending on the effectiveness of treatment.	
Kansas City Life Insurance Co.	Partial rating reduction based on type and duration of treatment. Standard rating possible after "a number of years."	
The Life Insurance Company of Virginia	Encloses article on the effect of treatment on hypertension and its implication for the insurer. Thesis: treatment lowers risk, but not to standard levels.	

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
The Lincoln National Life Insurance Co.	Partial rating reduction from the inception of treatment, increasing at intervals of 2, 3, and 4 years. Standard rating possible after 5 years if applicant has near normal blood pressure (150/96 or lower).	Usually 2 years, occasionally less.
Massachusetts Mutual Life Insurance Co.	Rating reduction for control "using the less drastic methods of drug treatment."	
Metropolitan Life	Rating based on current blood pressure with debits added depending upon medications used. In certain cases, additional debits imposed based on pretreatment levels and the duration of sustained high blood pressure. Total rating will never exceed that based on pretreatment readings.	
Minnesota Mutual Life Insurance Co.	Presence or absence of treatment affects rating, which can be reduced.	
Mutual Benefit Life Insurance Co.	Rating reduction based on degree and duration of control.	
The National Life and Accident Insurance Co.	Rating can be removed after blood pressure has been reduced and maintained at the lower reading.	
National Life Insurance Co.	Partial rating reduction based on response to and duration of treatment. Standard rating possible only if applicant is normotensive and treatment has been discontinued.	

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
New England Mutual Life Insurance Co.	Partial rating reduction based on type and duration of treatment. Standard rating possible after "a number of years."	Usually 2 years.
The Northwestern Mutual Life Insurance Co.	Rating reductions based on success and duration of treatment. Standard rating not possible.	
Northwestern National Life Insurance Co.	A reduced rating possible after applicant has been under treatment for 1 year or more; standard rating possible after an unspecified period.	1 year.
Occidental Life of California	Reduced ratings possible after "a reasonable period."	
The Penn Mutual Life Insurance Co.	Some rating reduction for treatment.	
Phoenix Mutual Life Insurance Co.	Some rating reduction, increasing with duration of treatment to a minimum rating at 5 years; standard rating not possible.	
Provident Life and Accident Insurance Co.	Rating reductions, and even removal, possible depending on duration and effectiveness of treatment.	Usually 2 years.
Provident Mutual Life Insurance Co. of Philadelphia	Rating reductions possible after 1 year of treatment, additional reductions given for continued treatment down to minimum rating.	

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
The Prudential Insurance Co. of America	Partial rating reduction possible if the applicant has been under treatment for 6 months, with further incremental reductions up to 6 years. Standard rating possible after 6 years.	1 year.
Southland Life Insurance Co.	Follows procedures of the major reinsurers.	
Southwestern Life	Rating reduction possible after effective treatment. 50% reduction if under treatment less than 5 years; 66-2/3% reduction after 5 years.	
State Farm Life Insurance Co.	Rating reduction given for continuing control using proper antihypertensive medications.	1 year.
State Mutual Life Assurance Co. of America	Implies a possible rating reduction with treatment.	
The Travelers Insurance Co.	General industry procedure.	
The Union Central Insurance Co.	Partial rating reduction based on type and duration of treatment. Standard rating possible after "a number of years."	
United Benefit Life Insurance Co.	Rating reduction where individual has demonstrated cooperation with and tolerance to treatment, down to minimum rating of +50% mortality.	

Company	Consideration given to the hypertensive under treatment	Waiting period for re-rating
Washington National Insurance Co.	Partial rating reduction from the inception of treatment, increasing at intervals of 2, 3, and 4 years. Standard rating possible after 5 years if applicant has near normal blood pressure (150/96 or lower).	
Western-Southern Life	Rating reduction is given only if the blood pressure is down and treatment has been discontinued. Size of reduction depends on the time elapsed since cessation of treatment.	

PART III. DEBIT REDUCTIONS POSSIBLE AFTER CONTINUED SUCCESSFUL TREATMENT FOR HYPERTENSION

In evaluating an individual's application for life insurance, insurers base their calculations on estimates of the mortality rate among persons having similar characteristics. The normal mortality rate for persons of a given age and sex is set equal to 100 percent. Any excess mortality attributable to a specific condition or set of conditions is expressed as "debits," percentage points over 100 percent. For example, a person whose elevated blood pressure places him in a 50-debit category is 50 percent more likely to die prematurely (150 percent of normal) than other persons of the same age and sex.

An excellent explanation of the implications of increases in mortality to the life insurer was provided by A. L. Van Ness, M.D., Medical Director, State Farm Life Insurance Company:

> "If we insure 1000 apparently healthy males, age 35, in ten years at standard morality ratio (100%), 975 out of the 1000 will be surviving. At twice the mortality ratio (200%), 945 people will be surviving out of the 1000 in ten years. . . . this is only 3% less than the 975 in the standard class. This difference is not detectable by the practicing physician over a ten-year period and would lead anyone to conclude that 200% mortality is of minor importance. This extra mortality, however, would require a 26% increase in the premium of all the members of that group. This is the explanation as to why minor elevation of blood pressure, which may well account for a 200% mortality ratio, mandates an increase in premium."*

The examples on following pages show the number of debits one insurer assigns to various levels of high blood pressure, together with the way these debits decrease as the individual remains on treatment. These figures illustrate

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* Letter to John B. Stokes, III, M.D., Executive Secretary, National High Blood Pressure Education Program. May 23, 1973.

the effectiveness of continued successful treatment in reducing total mortality due to hypertension. In addition, as debits are used in assigning applicants to rating categories, thus determining the costs of various different types of insurance, these examples give an approximation of the extent to which an individual might reduce the costs of his life insurance by controlling his blood pressure. The numbers given cannot be used directly to calculate premium reductions, however, as the degree of reductions and the size of the premium vary with the plan selected.

EXAMPLE #1. Male, aged 43*

Insurer: Lincoln National Life Insurance Co.

	Pretreatment blood pressure	Stabilized after 2 years of treatment	Stabilized after 5 years of treatment
Blood pressure:	145/92	135/88	135/88
Debits:	65	30	15
Blood pressure:	155/98	140/90	140/90
Debits:	150	95	30
Blood pressure:	165/105	145/95	145/95
Debits:	250	175	85
Blood pressure:	175/108	150/97	150/97
Debits:	310	258	125

* All figures here represent raw numbers drawn from a table, with no adjustments made for other factors, such as a normal EKG, which might reduce or eliminate the number of debits assigned.

EXAMPLE #2. Female, aged 43

Insurer: Lincoln National Life Insurance Co.

	Pretreatment blood pressure	Stablized after 2 years of treatment	Stabilized after 5 years of treatment
Blood pressure:	145/92	135/88	135/88
Debits:	43	20	10
Blood pressure:	155/98	140/90	140/90
Debits:	120	70	20
Blood pressure:	165/105	145/95	145/95
Debits:	205	145	60
Blood pressure:	175/108	150/97	150/97
Debits:	255	211	100

EXAMPLE #3. Male, aged 55

Insurer: Lincoln National Life Insurance Co.

	Pretreatment blood pressure	Stabilized after 2 years of treatment	Stabilized after 5 years of treatment
Blood pressure:	145/92	135/88	135/88
Debits:	55	25	5
Blood pressure:	155/98	140/90	140/90
Debits:	135	80	25
Blood pressure:	165/105	145/95	145/95
Debits:	225	150	75
Blood pressure:	175/108	150/97	150/97
Debits:	285	178	115

EXAMPLE #4. Female, aged 55

Insurer: Lincoln National Life Insurance Co.

	Pretreatment blood pressure	Stabilized after 2 years of treatment	Stabilized after 5 years of treatment
Blood pressure:	145/92	135/88	135/88
Debits:	33	10	0
Blood pressure:	155/98	140/90	140/90
Debits:	103	65	10
Blood pressure:	165/105	145/95	145/95
Debits:	180	122	48
Blood pressure:	175/108	150/97	150/97
Debits:	225	185	85

PART IV. INCREASED LIFE INSURANCE COSTS ASSOCIATED WITH LOW-LEVEL HYPERTENSION

Part III illustrated the increased mortality associated with various levels of blood pressure, together with the decreases in mortality made possible by treatment. Here, the impact of hypertension is examined from a different perspective, that of increased cost to the insured individual.

When an individual's chances of dying prematurely significantly exceed those of similar individuals, the insurer will insist on his paying an extra premium for his insurance to offset this extra risk. Both the relative and absolute size of the extra premium will depend upon the type of plan the individual has purchased, as well as his age and physical condition. Premium increases based on high blood pressure assessed by one major insurer for two common types of insurance are shown in Table 3.

Table 3. Increased Costs of Life Insurance Associated with Mild Increases in Blood Pressure, John Hancock Mutual Life Insurance Company

Purchaser and Type of Insurance	Base Premium Per $1,000, Issued to:						
	Standard Risks	Rating Category A 130–150% Normal Mortality		Rating Category B 155–175% Normal Mortality		Rating Category C 180–225% Normal Mortality	
	$	$	% Increase in Premium	$	% Increase in Premium	$	% Increase in Premium
Male, Age 25:							
Whole Life	16.34	18.43	12.8	19.60	20.0	21.25	30.0
5 Year Renewable Term	4.50	6.07	34.9	6.97	54.9	8.36	85.8
Male, Age 43:							
Whole Life	30.38	34.66	14.1	37.19	22.4	40.79	34.3
5 Year Renewable Term	9.71	13.32	37.2	15.58	60.4	18.98	95.5
Male, Age 55:							
Whole Life	49.93	57.13	14.4	61.73	23.6	68.55	37.3
5 Year Renewable Term	23.04	31.93	38.6	37.69	63.6	46.37	101.3
Female, Age 43:							
Whole Life	28.50	32.78	15.0	35.31	23.9	38.91	36.5
5 Year Renewable Term	8.91	12.52	40.5	14.78	65.9	18.18	104.0
Female, Age 55:							
Whole Life	46.77	53.97	15.4	58.57	25.2	65.39	39.8
5 Year Renewable Term	20.77	29.66	42.8	35.42	70.5	44.10	112.3

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